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Analyses of Natural Gases, 1975

UNITED STATES DEPARTMENT OF THE INTERIOR

U.S. Bureau of Mines.
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Analyses of Natural Gases, 1975

By B. J. Moore
Helium Operations, Division of Helium, Amarillo, Tex.

UNITED STATES DEPARTMENT OF THE INTERIOR
Thomas S. Kleppe, Secretary

BUREAU OF MINES
Thomas V. Falkie, Director

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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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CONTENTS

Page

Introduction..... 1
Acknowledgments..... 2
Tables..... 3

TABLES

1. Samples from gas and oil wells in the United States..... 4
2. Samples from pipelines in the United States..... 74
3. Samples from gas and oil wells in foreign countries..... 82

ANALYSES OF NATURAL GASES, 1975

by

B. J. Moore[1]

INTRODUCTION

This publication contains analyses and related source data for 234 natural gas samples from wells and pipelines in 21 States and 1 foreign country. All of the samples were obtained and analyzed during calendar year 1975 as a part of Bureau of Mines investigations of the occurrences of helium in natural gases of countries with free market economies. This survey has been conducted in the United States by the Bureau of Mines since 1917. In late 1965, the survey was expanded to include foreign gasfields. The analyses published herein were made by mass spectrometer and a special helium analysis apparatus, which are described in Bureau of Mines Bulletins 486[2] and 576.[3]

The results of the investigation of the occurrences of helium are published annually to make the information available as soon as possible to the gas industry and the public in general. Seventeen previous publications have presented the results of 10,831 gas analyses prior to 1975. The first 3, Bulletins 486,[4] 576,[5] and 617,[6] contain analyses and related source data on 5,218 gas samples collected from 1917 through 1960. The other 14

[1]Chief, Section of Helium Resources Evaluation, Branch of Helium Resources.

[2]Anderson, C. C., and H. H. Hinson. Helium-Bearing Natural Gases of the United States. Analyses and Analytical Methods. BuMines Bull. 486, 1951, 141 pp.

[3]Boone, W. J., Jr. Helium-Bearing Natural Gases of the United States. Analyses and Analytical Methods. Supplement to Bulletin 486. BuMines Bull. 576, 1958, 117 pp.

[4]Work cited in footnote 2.

[5]Work cited in footnote 3.

[6]Munnerlyn, R. D., and R. D. Miller. Helium-Bearing Natural Gases of the United States: Analyses. Second Supplement to Bulletin 486. BuMines Bull. 617, 1963, 93 pp.

publications,[7] which were issued as information circulars, supplement the 3 bulletins and contain 5,613 analyses of samples collected since 1960. This publication is the 15th publication supplementing the 3 bulletins.

In 1976, a compilation of the analyses included in the 17 previously mentioned publications was released by the National Technical Information Service of the U.S. Department of Commerce. This compilation, entitled "Analyses of Natural Gases, 1917-74," contains 10,562 analyses of gas samples from oil and gas wells and natural gas pipelines in 37 States and 23 foreign countries. The compilation is available from the National Technical Information Service, Springfield, Va. 22161. Catalog number of the publication is PB 251-202 and the price is $21.25.

In addition to being included in the publications, all published analyses and related information are available on a magnetic tape file. The tape is also available from the National Technical Information Service, and orders should refer to Bureau of Mines Tape PB 234-511, $97.50.

ACKNOWLEDGMENTS

The helium survey program is conducted by soliciting natural gas samples throughout the United States and other countries with free market economies. Without the assistance of the oil and gas industry, State and national agencies, and many individuals engaged in oil and gas exploration and production, the helium survey with its present scope would be impossible.

The analyses listed in the tables were made by the Technical Services Unit of the Section of Chemical Engineering, Helium Operations, Bureau of Mines, Amarillo, Tex. The list of analyses was produced through use of a computer by the Section of Automatic Data Processing, Helium Operations, Bureau of Mines, Amarillo, Tex.

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[7] Miller, R. D., and G. P. Norrell. Analyses of Natural Gases of the United States, 1961. BuMines IC 8221, 1964, 148 pp.
_____. Analyses of Natural Gases of the United States, 1962. BuMines IC 8239, 1964, 120 pp.
_____. Analyses of Natural Gases of the United States, 1963. BuMines IC 8241, 1965, 102 pp.
Moore, B. J., R. D. Miller, and R. D. Shrewsbury. Analyses of Natural Gases of the United States, 1964. BuMines IC 8302, 1966, 144 pp.
Moore, B. J., and R. D. Shrewsbury. Analyses of Natural Gases of the United States, 1965. BuMines IC 8316, 1966, 181 pp.
_____. Analyses of Natural Gases, 1966. BuMines IC 8356, 1967, 130 pp.
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Cardwell, L. E., and L. F. Benton. Analyses of Natural Gases, 1968. BuMines IC 8443, 1969, 169 pp.
_____. Analyses of Natural Gases, 1969. BuMines IC 8475, 1970, 134 pp.
_____. Analyses of Natural Gases, 1970. BuMines IC 8518, 1971, 130 pp.
_____. Analyses of Natural Gases, 1971. BuMines IC 8554, 1972, 163 pp.
_____. Analyses of Natural Gases, 1972. BuMines IC 8607, 1973, 104 pp.
Moore, B. J. Analyses of Natural Gases, 1973. BuMines IC 8658, 1974, 96 pp.
_____. Analyses of Natural Gases, 1974. BuMines IC 8684, 1975, 122 pp.

TABLES

The following tables include the results of analyses and related source data from gas samples, which are divided into three groups as follows:

Table 1. - Samples from gas and oil wells in the United States.

Table 2. - Samples from pipelines in the United States.

Table 3. - Samples from gas and oil wells in foreign countries.

The following list indicates the sources of the samples listed in the tables:

Source	Number of samples	Tables
Alabama	1	2
Alaska	1	1
Arkansas	4	1
California	2	1
Colorado	5	1, 2
Kansas	15	1
Kentucky	1	1
Louisiana	12	1
Michigan	2	1
Montana	16	1, 2
New Mexico	28	1, 2
New York	5	1
North Dakota	2	1
Ohio	1	1
Oklahoma	42	1
Pennsylvania	4	1
South Dakota	1	2
Texas	84	1, 2
Utah	1	2
West Virginia	1	1
Wyoming	5	1
Canada	1	3

All components of the analyses in the tables are reported to the nearest 0.1 percent, except helium, which is reported to the nearest 0.01 percent. The word "trace" is used to denote quantities of helium of less than 0.005 percent and quantities of other components of less than 0.05 percent.

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 1 SAMPLE 14291	INDEX 2 SAMPLE 14517	INDEX 3 SAMPLE 14518
STATE	ALASKA	ARKANSAS	ARKANSAS
COUNTY	NORTH SLOPE	CRAWFORD	CRAWFORD
FIELD	IKO BAY	DYER	DYER
WELL NAME	IKO NO. 1	LETHA CHANCELLOR NO. 1	LETHA CHANCELLOR NO. 1
LOCATION	SEC. 16, T21N, R16W	SEC. 31, T10N, R29W	SEC. 31, T10N, R29W
OWNER	U. S. NAVY	WESTRANS PETROLEUM, INC.	WESTRANS PETROLEUM, INC.
COMPLETED	03/09/75	04/06/75	04/06/75
SAMPLED	03/09/75	10/25/75	10/25/75
FORMATION	NOT GIVEN	PENN-DUNN A	PENN-BARTON
DEPTH, FEET	NOT GIVEN	4820	4890
WELLHEAD PRESSURE,PSIG	NOT GIVEN	1175	1110
OPEN FLOW, MCFD	NOT GIVEN	19243	18337
COMPONENT, MOLE PCT			
METHANE	96.7	97.3	89.0
ETHANE	1.9	1.2	1.1
PROPANE	0.4	0.1	0.1
N-BUTANE	0.1	TRACE	0.0
ISOBUTANE	0.1	TRACE	TRACE
N-PENTANE	TRACE	TRACE	0.0
ISOPENTANE	TRACE	TRACE	TRACE
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	TRACE
NITROGEN	0.7	0.6	7.2
OXYGEN	0.0	0.0	1.6
ARGON	TRACE	TRACE	0.1
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	0.6	0.6
HELIUM	0.04	0.07	0.07
HEATING VALUE*	1031	1010	924

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 4 SAMPLE 14415	INDEX 5 SAMPLE 14416	INDEX 6 SAMPLE 14313
STATE	ARKANSAS	ARKANSAS	CALIFORNIA
COUNTY	SEBASTIAN	SEBASTIAN	MERCED
FIELD	WITCHERVILLE	WITCHERVILLE	NOT GIVEN
WELL NAME	CARTER NO. 1	CARTER NO. 1	PACHECO TUNNEL
LOCATION	SEC. 26, T6N, R31W	SEC. 26, T6N, R31W	SEC. 14, T10S, R7E
OWNER	ARKLA EXPLORATION CO.	ARKLA EXPLORATION CO.	U.S. BUREAU OF RECLAMATION
COMPLETED	03/10/75	03/10/75	NOT GIVEN
SAMPLED	07/17/75	07/17/75	03/26/75
FORMATION	PENN-TURNER U	PENN-TURNER L	JURA-CRET-FRANCISCAN
DEPTH, FEET	3581	3776	NOT GIVEN
WELLHEAD PRESSURE,PSIG	550	1075	NOT GIVEN
OPEN FLOW, MCFD	1200	2100	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	97.7	97.8	35.1
ETHANE	1.4	1.3	0.1
PROPANE	0.2	0.2	TRACE
N-BUTANE	0.0	0.0	TRACE
ISOBUTANE	0.0	0.0	0.1
N-PENTANE	0.0	0.0	0.0
ISOPENTANE	0.0	0.0	0.1
CYCLOPENTANE	0.0	0.0	TRACE
HEXANES PLUS	0.0	0.0	TRACE
NITROGEN	0.3	0.3	63.6
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	0.8
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.3	0.4	0.2
HELIUM	0.07	0.07	0.01
HEATING VALUE*	1020	1019	365

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 7 SAMPLE 14419	INDEX 8 SAMPLE 14434	INDEX 9 SAMPLE 14314
STATE	CALIFORNIA	COLORADO	COLORADO
COUNTY	SHASTA	HUERFANO	MESA
FIELD	NOT GIVEN	SHEEP MOUNTAIN AREA	WILDCAT
WELL NAME	DRAINAGE HOLE	KOSCOVE NO. 1	FEDERAL NO. 15-1
LOCATION	WHISKEYTOWN DAMSITE	SEC. 15, T27S, R70W	SEC. 15, T2N, R2W
OWNER	U.S. BUREAU OF RECLAMATION	ATLANTIC RICHFIELD CO.	MITCHELL ENERGY CORP.
COMPLETED	--/--/65	07/11/74	08/--/73
SAMPLED	07/23/75	08/02/75	04/02/75
FORMATION	DEVO-	CRET-DAKOTA	CRET-DAKOTA
DEPTH, FEET	NOT GIVEN	3344	2078
WELLHEAD PRESSURE,PSIG	NOT GIVEN	700	611
OPEN FLOW, MCFD	NOT GIVEN	46000	3856
COMPONENT, MOLE PCT			
METHANE	68.4	1.8	86.6
ETHANE	0.1	0.2	0.7
PROPANE	TRACE	0.1	0.2
N-BUTANE	0.0	0.0	TRACE
ISOBUTANE	0.0	0.0	TRACE
N-PENTANE	0.0	0.0	TRACE
ISOPENTANE	0.0	0.0	0.0
CYCLOPENTANE	0.0	0.0	TRACE
HEXANES PLUS	0.0	0.0	TRACE
NITROGEN	30.7	0.6	3.2
OXYGEN	0.0	0.0	0.0
ARGON	0.3	TRACE	TRACE
HYDROGEN	0.0	TRACE	0.0
HYDROGEN SULFIDE**	TRACE	0.0	0.0
CARBON DIOXIDE	0.5	97.3	9.0
HELIUM	0.01	0.03	0.19
HEATING VALUE*	695	24	895

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 10 SAMPLE 14323	INDEX 11 SAMPLE 14546	INDEX 12 SAMPLE 14398
STATE	COLORADO	COLORADO	KANSAS
COUNTY	RIO BLANCO	WELD	COMANCHE
FIELD	ROCK CANYON	SPINDLE	AETNA
WELL NAME	GOVERNMENT NO. 2-25	FOX NO. 1	BALLET RANCH NO. 3
LOCATION	SEC. 25, T4S, R102W	SEC. 24, T2N, R68W	SEC. 36, T34S, R16W
OWNER	NORRIS OIL CO.	PANHANDLE WESTERN GAS CO.	BEREN CORP.
COMPLETED	03/06/75	10/01/75	01/29/75
SAMPLED	04/28/75	12/15/75	03/19/75
FORMATION	CRET-MANCOS B	CRET-SUSSEX	MISS-
DEPTH, FEET	3040	4427	NOT GIVEN
WELLHEAD PRESSURE,PSIG	470	1248	1650
OPEN FLOW, MCFD	2050	6919	7236
COMPONENT, MOLE PCT			
METHANE	82.0	83.0	93.5
ETHANE	7.3	6.1	3.1
PROPANE	5.7	5.1	1.1
N-BUTANE	1.6	1.4	0.3
ISOBUTANE	0.7	0.9	0.2
N-PENTANE	0.1	0.3	0.1
ISOPENTANE	0.5	0.3	0.1
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.2
NITROGEN	1.5	2.4	1.0
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.2	0.1	0.1
HELIUM	0.15	0.05	0.06
HEATING VALUE*	1218	1191	1071

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 13 SAMPLE 14329	INDEX 14 SAMPLE 14417	INDEX 15 SAMPLE 14301
STATE	KANSAS	KANSAS	KANSAS
COUNTY	COMANCHE	ELLSWORTH	HARPER
FIELD	SCHUETTE	ELLSWORTH	HARPER
WELL NAME	SCHUETTE NO. 1	KIHN NO. 1	CLEMENTS NO. 1
LOCATION	SEC. 35, T31S, R16W	SEC. 30, T15S, R8W	SEC. 11, T32S, R7W
OWNER	NATIONAL OIL CO.	ARTHUR GORSKI	BEREN CORP.
COMPLETED	03/01/74	06/06/75	08/07/74
SAMPLED	05/09/75	07/23/75	08/07/74
FORMATION	MISS-	PENN-LANSING	ORDO-SIMPSON
DEPTH, FEET	4839	2550	4713
WELLHEAD PRESSURE,PSIG	1100	900	1441
OPEN FLOW, MCFD	31000	2000	1272
COMPONENT, MOLE PCT			
METHANE	91.1	62.1	63.6
ETHANE	3.3	5.8	7.1
PROPANE	1.1	3.2	5.1
N-BUTANE	0.3	1.1	1.4
ISOBUTANE	0.3	0.6	0.5
N-PENTANE	TRACE	0.3	0.2
ISOPENTANE	0.2	0.2	0.3
CYCLOPENTANE	0.1	0.1	TRACE
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	1.4	25.6	21.2
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	0.1
HYDROGEN	0.3	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.7	0.1	TRACE
HELIUM	0.11	0.80	0.61
HEATING VALUE*	1049	904	994

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 16 SAMPLE 14302	INDEX 17 SAMPLE 14530	INDEX 18 SAMPLE 14385
STATE	KANSAS	KANSAS	KANSAS
COUNTY	HARPER	KINGMAN	KIOWA
FIELD	HARPER	BELMONT CENTER	ALFORD
WELL NAME	CLEMENTS NO. 1	DUCKWORTH NO. 1	UNRUH D-1
LOCATION	SEC. 11, T32S, R7W	SEC. 23, T29S, R8W	SEC. 36, T30S, R18W
OWNER	BEREN CORP.	KEENER OIL CO.	MAURICE L. BROWN CO.
COMPLETED	08/07/74	06/14/75	NOT GIVEN
SAMPLED	03/14/75	11/13/75	06/13/75
FORMATION	PENN-LANSING-KANSAS CITY	MISS-	MISS-
DEPTH, FEET	3960	4208	4948
WELLHEAD PRESSURE,PSIG	600	1245	1100
OPEN FLOW, MCFD	40	4707	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	63.7	87.4	72.2
ETHANE	7.2	5.2	0.2
PROPANE	5.0	2.4	0.2
N-BUTANE	1.4	0.7	0.1
ISOBUTANE	0.5	0.4	0.1
N-PENTANE	0.2	0.1	TRACE
ISOPENTANE	0.2	0.4	TRACE
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	0.1	0.1	TRACE
NITROGEN	21.0	2.9	24.4
OXYGEN	0.0	0.0	2.2
ARGON	0.1	0.0	0.3
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	0.1	0.1
HELIUM	0.61	0.17	0.20
HEATING VALUE*	990	1108	747

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 19 SAMPLE 14389	INDEX 20 SAMPLE 14386	INDEX 21 SAMPLE 14287
STATE	KANSAS	KANSAS	KANSAS
COUNTY	KIOWA	KIOWA	MORTON
FIELD	ALFORD	NOT GIVEN	WILBURTON
WELL NAME	PARKIN NO. 1	KOEHN NO. 1	GORE NO. D-2
LOCATION	SEC. 2, T30S, R19W	SEC. 27, T30S, R18W	SEC. 4, T35S, R41W
OWNER	MAURICE L. BROWN CO.	MAURICE L. BROWN CO.	CITIES SERVICE OIL CO.
COMPLETED	06/20/74	NOT GIVEN	NOT GIVEN
SAMPLED	06/13/75	06/12/75	03/03/75
FORMATION	MISS-	MISS-	PENN-TOPEKA
DEPTH, FEET	5050	5056	3216
WELLHEAD PRESSURE,PSIG	1200	1200	160
OPEN FLOW, MCFD	4500	NOT GIVEN	2505
COMPONENT, MOLE PCT			
METHANE	90.4	87.0	62.6
ETHANE	3.3	3.6	8.8
PROPANE	1.0	1.3	6.7
N-BUTANE	0.3	0.3	2.1
ISOBUTANE	0.2	0.2	0.8
N-PENTANE	0.1	0.1	0.5
ISOPENTANE	0.2	0.1	0.3
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.2
NITROGEN	4.1	6.2	17.4
OXYGEN	TRACE	0.0	TRACE
ARGON	TRACE	TRACE	0.1
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	0.5	0.1
HELIUM	0.20	0.47	0.47
HEATING VALUE*	1036	1010	1112

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 22 SAMPLE 14322	INDEX 23 SAMPLE 14525	INDEX 24 SAMPLE 14492
STATE	KANSAS	KANSAS	KANSAS
COUNTY	PAWNEE	RENO	SEWARD
FIELD	LUCAS	WISBY NW	LEMERT
WELL NAME	FINGER NO. 1	PROFFITT NO. 1	EDNA SCOTT NO. 1
LOCATION	SEC. 31, T20S, R16W	SEC. 12, T22S, R10W	SEC. 15, T32S, R33W
OWNER	FRONTIER OIL CO.	SHIELDS OIL PRODUCERS, INC.	AMOCO PRODUCTION CO.
COMPLETED	09/06/74	04/20/75	08/18/75
SAMPLED	04/23/74	11/05/75	10/03/75
FORMATION	CAMO-ARBUCKLE	PENN-KANSAS CITY	PENN-MORROW
DEPTH, FEET	3811	3120	5516
WELLHEAD PRESSURE,PSIG	1000	1200	719
OPEN FLOW, MCFD	10000	2500	4500
COMPONENT, MOLE PCT			
METHANE	22.8	70.8	86.5
ETHANE	3.2	4.1	5.0
PROPANE	1.3	2.0	2.8
N-BUTANE	0.8	0.5	0.7
ISOBUTANE	0.6	0.3	0.4
N-PENTANE	0.1	0.1	0.1
ISOPENTANE	0.3	0.1	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	66.0	21.0	4.1
OXYGEN	0.0	0.0	0.0
ARGON	0.2	TRACE	TRACE
HYDROGEN	TRACE	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.5	0.1	0.1
HELIUM	3.98	0.91	0.13
HEATING VALUE*	391	883	1089

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 25 SAMPLE 14472	INDEX 26 SAMPLE 14490	INDEX 27 SAMPLE 14310
STATE	KANSAS	KANSAS	KENTUCKY
COUNTY	SEWARD	SEWARD	BELL
FIELD	SALLY	WILDCAT	WILDCAT
WELL NAME	STEVESSEN NO. A-2	EDNA SCOTT NO. 1	AMERICAN ASSOCIATION NO. 1
LOCATION	SEC. 20, T34S, R33W	SEC. 15, T32S, R33W	CARTER COORDINATE 5-B-70
OWNER	CITIES SERVICE OIL CO.	AMOCO PRODUCTION CO.	SAN JUAN OIL CO.
COMPLETED	06/12/75	08/18/75	11/08/74
SAMPLED	09/--/75	10/14/75	04/04/75
FORMATION	PENN-MORROW	PENN-KANSAS CITY	MISS-BIG LIME
DEPTH, FEET	6044	4810	2928
WELLHEAD PRESSURE,PSIG	1590	705	1050
OPEN FLOW, MCFD	49152	196	11000
COMPONENT, MOLE PCT			
METHANE	86.3	51.5	98.1
ETHANE	4.9	13.1	0.2
PROPANE	3.0	16.6	0.1
N-BUTANE	0.8	5.1	0.0
ISOBUTANE	0.5	2.6	0.0
N-PENTANE	0.1	0.9	0.0
ISOPENTANE	0.4	0.9	0.0
CYCLOPENTANE	0.1	0.2	0.0
HEXANES PLUS	0.2	0.3	0.0
NITROGEN	3.1	8.6	1.0
OXYGEN	TRACE	TRACE	0.0
ARGON	0.0	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.4	TRACE	0.6
HELIUM	0.16	0.09	0.05
HEATING VALUE*	1119	1547	1000

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 28 SAMPLE 14493	INDEX 29 SAMPLE 14507	INDEX 30 SAMPLE 14534
STATE	LOUISIANA	LOUISIANA	LOUISIANA
PARISH	ACADIA	ASSUMPTION	DESOTO
FIELD	RAYNE	BAYOU SHERMAN	WILDCAT
WELL NAME	E. B. PETITJEAN NO. 1	SCHOOL BOARD NO. 1-A	JACKSON B. DAVIS NO. 2
LOCATION	SEC. 13, T9S, R2E	SEC. 16, T15S, R14E	SEC. 24, T15N, R14W
OWNER	CONTINENTAL OIL CO.	EXCHANGE OIL & GAS CORP.	MAY PETROLEUM, INC.
COMPLETED	07/18/75	11/10/73	11/17/75
SAMPLED	10/17/75	10/14/75	11/17/75
FORMATION	OLIG-NODOSARIA	OLIG-DISCORBIS	CRET-RODESSA
DEPTH, FEET	16079	15790	5200
WELLHEAD PRESSURE,PSIG	10600	5300	2100
OPEN FLOW, MCFD	9500	NOT GIVEN	1700
COMPONENT, MOLE PCT			
METHANE	85.7	90.5	92.1
ETHANE	7.7	4.0	3.7
PROPANE	2.3	1.9	1.3
N-BUTANE	0.4	0.4	0.4
ISOBUTANE	0.6	0.4	0.3
N-PENTANE	0.1	0.1	0.1
ISOPENTANE	0.1	0.1	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	0.1	0.2
NITROGEN	0.4	0.5	1.2
OXYGEN	0.0	0.0	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.6	1.8	0.5
HELIUM	TRACE	TRACE	0.03
HEATING VALUE*	1113	1078	1075

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 31 SAMPLE 14535	INDEX 32 SAMPLE 14527	INDEX 33 SAMPLE 14442
STATE	LOUISIANA	LOUISIANA	LOUISIANA
PARISH	DESOTO	EVANGELINE	IBERIA
FIELD	WILDCAT	DURALDE	BAYOU POSTILLION E
WELL NAME	JACKSON B. DAVIS NO. 2	PINELANDS PETROLEUM NO. 1	E.H. PETERMAN ET AL. NO. C-2
LOCATION	SEC. 24, T15N, R14W	SEC. 21, T5S, R2W	SEC. 36, T12S, R11E
OWNER	MAY PETROLEUM, INC.	SKLAR & PHILLIPS, INC.	CHEVRON OIL CO.
COMPLETED	11/17/75	10/12/75	02/18/74
SAMPLED	11/17/75	11/04/75	08/14/75
FORMATION	CRET-PETTIT	OLIG-FRIO	-14800 FT. SAND
DEPTH, FEET	6300	7704	14588
WELLHEAD PRESSURE,PSIG	2450	2700	5500
OPEN FLOW, MCFD	2100	NOT GIVEN	13300
COMPONENT, MOLE PCT			
METHANE	92.7	91.9	94.0
ETHANE	3.7	3.6	2.6
PROPANE	1.1	2.1	0.8
N-BUTANE	0.3	0.5	0.2
ISOBUTANE	0.3	0.7	0.2
N-PENTANE	0.1	0.2	0.1
ISOPENTANE	0.1	0.2	0.1
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	0.1	0.2	0.1
NITROGEN	0.4	0.7	0.4
OXYGEN	0.0	0.0	0.0
ARGON	0.0	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.2	0.1	1.4
HELIUM	0.01	TRACE	0.01
HEATING VALUE*	1068	1121	1047

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 34 SAMPLE 14447	INDEX 35 SAMPLE 14253	INDEX 36 SAMPLE 14373
STATE	LOUISIANA	LOUISIANA	LOUISIANA
PARISH	JACKSON	LAFAYETTE	ST. MARTIN
FIELD	DANVILLE	PARCPERDUE N	FAUSSE POINTE
WELL NAME	CAN B NO. 1	GUIDRY NO. 1	STATE LEASE 293 NO. 109
LOCATION	SEC. 29, T14N, R4W	SEC. 23, T11S, R4E	T11S, R8E
OWNER	PHILLIPS PETROLEUM CO.	PHILLIPS PETROLEUM CO.	TEXACO INC.
COMPLETED	01/26/74	06/12/74	10/28/74
SAMPLED	09/02/75	01/03/75	05/22/75
FORMATION	CRET-HOSSTON	OLIG-CAMERINA	PLIO-
DEPTH, FEET	8530	15735	810
WELLHEAD PRESSURE,PSIG	3259	8900	320
OPEN FLOW, MCFD	3000	52000	180
COMPONENT, MOLE PCT			
METHANE	94.1	87.0	94.8
ETHANE	0.2	6.5	2.6
PROPANE	TRACE	2.9	1.0
N-BUTANE	0.0	0.5	0.1
ISOBUTANE	0.0	1.2	0.1
N-PENTANE	0.0	0.2	TRACE
ISOPENTANE	0.0	0.1	TRACE
CYCLOPENTANE	0.0	TRACE	TRACE
HEXANES PLUS	0.0	0.1	0.1
NITROGEN	3.0	0.4	0.8
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	TRACE
HYDROGEN	0.0	0.0	0.4
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.6	1.0	0.2
HELIUM	0.08	TRACE	0.01
HEATING VALUE*	957	1148	1046

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 37 SAMPLE 14376	INDEX 38 SAMPLE 14438	INDEX 39 SAMPLE 14439
STATE	LOUISIANA	LOUISIANA	LOUISIANA
PARISH	ST. MARY	VERMILION	VERMILION
FIELD	SWEET BAY LAKE	GUEYDAN E	GUEYDAN E
WELL NAME	MIAMI CORPORATION NO. 12	CAMILE ADAM NO. 1	CAMILE ADAM ET AL. NO. 3
LOCATION	SEC. 20, T17S, R12E	SEC. 30, T11S, R1E	SEC. 31, T11S, R1E
OWNER	TEXACO INC.	ATLANTIC RICHFIELD CO.	ATLANTIC RICHFIELD CO.
COMPLETED	10/31/74	NOT GIVEN	NOT GIVEN
SAMPLED	05/23/75	08/15/75	08/--/75
FORMATION	MIOC-	OLIG-FRIO	OLIG-FRIO
DEPTH, FEET	12852	12896	11469
WELLHEAD PRESSURE,PSIG	850	9650	5950
OPEN FLOW, MCFD	1200	NOT GIVEN	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	88.5	93.5	93.0
ETHANE	5.0	3.3	3.8
PROPANE	2.5	1.0	1.4
N-BUTANE	0.7	0.1	0.3
ISOBUTANE	0.8	0.3	0.5
N-PENTANE	0.2	TRACE	TRACE
ISOPENTANE	0.4	0.1	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.2	0.1	0.1
NITROGEN	0.8	0.7	0.4
OXYGEN	0.1	TRACE	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.8	0.9	0.4
HELIUM	TRACE	TRACE	TRACE
HEATING VALUE*	1137	1055	1083

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 40 SAMPLE 14409	INDEX 41 SAMPLE 14410	INDEX 42 SAMPLE 14391
STATE	MICHIGAN	MICHIGAN	MONTANA
COUNTY	ANTRIM	KALKASKA	CARBON
FIELD	MANCELONA	EXCELSIOR	DRY CREEK
WELL NAME	STATE MANCELONA C NO. 1	SIMPSON-WESTERMAN NO. 1	ROBINSON NO. 15
LOCATION	SEC. 34, T29N, R5W	SEC. 31, T28N, R6W	SEC. 3, T7S, R21E
OWNER	AMOCO PRODUCTION CO.	AMOCO PRODUCTION CO.	MONTANA POWER CO.
COMPLETED	06/13/74	12/10/74	08/01/72
SAMPLED	07/07/75	07/07/75	04/09/75
FORMATION	SILU-NIAGARA	SILU-NIAGARA	CRET- JUDITH RIVER
DEPTH, FEET	6580	6880	1884
WELLHEAD PRESSURE,PSIG	2668	2736	375
OPEN FLOW, MCFD	22000	150000	500000
COMPONENT, MOLE PCT			
METHANE	82.6	87.1	87.2
ETHANE	8.9	6.0	7.1
PROPANE	4.0	2.9	2.3
N-BUTANE	1.0	0.9	0.4
ISOBUTANE	1.3	1.4	0.8
N-PENTANE	0.2	0.1	0.1
ISOPENTANE	0.5	0.5	0.4
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.2	0.1	0.2
NITROGEN	1.3	0.8	1.5
OXYGEN	TRACE	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.2	0.1
HELIUM	0.02	0.02	0.03
HEATING VALUE*	1218	1173	1142

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 43 SAMPLE 14328	INDEX 44 SAMPLE 14453	INDEX 45 SAMPLE 14330
STATE	MONTANA	MONTANA	MONTANA
COUNTY	CHOUTEAU	GLACIER	HILL
FIELD	BULLWACKER	CUT BANK	NOT GIVEN
WELL NAME	NORDEN NO. 3	CLAPPER NO U-1	CUNNINGHAM NO. 1
LOCATION	SEC. 29, T27N, R17E	SEC. 27, T35N, R5W	SEC. 14, T34N, R16E
OWNER	ROLAND S. BOND	MONTANA POWER CO.	WAINOCO, INC.
COMPLETED	09/23/74	08/13/35	01/05/75
SAMPLED	11/25/74	05/05/75	05/11/75
FORMATION	CRET-EAGLE	CRET-CUT BANK	CRET-EAGLE
DEPTH, FEET	2052	2625	670
WELLHEAD PRESSURE,PSIG	525	710	270
OPEN FLOW, MCFD	2434	15365	2150
COMPONENT, MOLE PCT			
METHANE	87.2	75.8	97.0
ETHANE	3.0	7.9	0.3
PROPANE	1.4	4.0	TRACE
N-BUTANE	0.3	1.3	0.0
ISOBUTANE	0.3	0.7	0.0
N-PENTANE	0.1	0.3	0.0
ISOPENTANE	0.1	0.4	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	0.1	0.2	0.0
NITROGEN	7.5	5.3	2.6
OXYGEN	TRACE	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	4.0	TRACE
HELIUM	0.08	0.14	0.08
HEATING VALUE*	1007	1121	988

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 46 SAMPLE 14333	INDEX 47 SAMPLE 14452	INDEX 48 SAMPLE 14392
STATE	MONTANA	MONTANA	MONTANA
COUNTY	HILL	PHILLIPS	STILLWATER
FIELD	NOT GIVEN	GUINN	BIG COULEE
WELL NAME	MILLER NO. 1	NOT GIVEN	U-1
LOCATION	SEC. 29, T34N, R16E	SEC. 20, T24N, R24E	SEC. 7, T4N, R20E
OWNER	WAINOCO, INC.	DOMESTIC RANCH USE	BURLINGTON NORTHERN INC.
COMPLETED	01/09/75	--/--/38	--/--/59
SAMPLED	05/11/75	NOT GIVEN	04/15/75
FORMATION	CRET-VIRGELLE	CRET-EAGLE	CRET-THIRD CAT CREEK
DEPTH, FEET	1489	NOT GIVEN	1930
WELLHEAD PRESSURE,PSIG	320	NOT GIVEN	432
OPEN FLOW, MCFD	3400	NOT GIVEN	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	96.3	36.8	89.8
ETHANE	0.3	0.5	0.3
PROPANE	TRACE	TRACE	TRACE
N-BUTANE	TRACE	0.0	TRACE
ISOBUTANE	TRACE	0.0	TRACE
N-PENTANE	TRACE	0.0	TRACE
ISOPENTANE	TRACE	0.0	TRACE
CYCLOPENTANE	TRACE	0.0	TRACE
HEXANES PLUS	TRACE	0.0	TRACE
NITROGEN	3.2	61.0	8.6
OXYGEN	0.0	1.0	0.0
ARGON	TRACE	0.5	0.1
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.1	0.9
HELIUM	0.09	0.02	0.23
HEATING VALUE*	981	382	915

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 49 SAMPLE 14394	INDEX 50 SAMPLE 14393	INDEX 51 SAMPLE 14440
STATE	MONTANA	MONTANA	NEW MEXICO
COUNTY	TOOLE	TOOLE	CHAVES
FIELD	DEVON	KEVIN SUNBURST	WILDCAT
WELL NAME	STATE NO. 33	VASHTI-MARMONT	MIDWEST FEDERAL NO. 1
LOCATION	SEC. 31, T32N, R2E	SEC. 28, T33N, R1W	SEC. 23, T10S, R29E
OWNER	MONTANA POWER CO.	MONTANA POWER CO.	DEPCO, INC.
COMPLETED	07/12/69	NOT GIVEN	09/09/74
SAMPLED	06/06/75	06/06/75	08/18/75
FORMATION	CRET-BOW ISLAND	CRET-SUNBURST	PENN-MORROW
DEPTH, FEET	850	1122	9277
WELLHEAD PRESSURE,PSIG	NOT GIVEN	93	2200
OPEN FLOW, MCFD	4600	480	2290
COMPONENT, MOLE PCT			
METHANE	91.8	93.6	84.6
ETHANE	1.2	1.3	6.1
PROPANE	0.2	0.6	2.9
N-BUTANE	TRACE	0.2	0.8
ISOBUTANE	TRACE	0.3	0.8
N-PENTANE	TRACE	0.1	0.2
ISOPENTANE	TRACE	0.2	0.5
CYCLOPENTANE	TRACE	TRACE	0.2
HEXANES PLUS	TRACE	0.2	0.4
NITROGEN	6.4	2.3	2.2
OXYGEN	0.0	0.0	0.3
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	1.2	1.0
HELIUM	0.15	0.06	0.05
HEATING VALUE*	957	1027	1153

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 52 SAMPLE 14437	INDEX 53 SAMPLE 14431	INDEX 54 SAMPLE 14531
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	EDDY
FIELD	ATOKA	AVALON	AVALON
WELL NAME	POKER LAKE UNIT NO. 42	OCOTILLO HILLS NO. 1	FASHEN-FEDERAL NO. 2
LOCATION	SEC. 10, T25S, R30E	SEC. 31, T21S, R26E	SEC. 5, T21S, R26E
OWNER	PERRY R. BASS, INC.	HANAGAN PETROLEUM CORP.	MONSANTO CO.
COMPLETED	09/16/74	12/--/74	08/13/74
SAMPLED	08/13/75	08/11/75	11/14/75
FORMATION	PENN-ATOKA	PENN-MORROW	PENN-MORROW
DEPTH, FEET	13732	10978	10734
WELLHEAD PRESSURE,PSIG	6800	3105	3567
OPEN FLOW, MCFD	NOT GIVEN	5000	17100
COMPONENT, MOLE PCT			
METHANE	91.9	96.1	96.0
ETHANE	4.6	2.0	2.2
PROPANE	1.1	0.4	0.4
N-BUTANE	0.2	TRACE	0.1
ISOBUTANE	0.3	0.1	0.1
N-PENTANE	0.1	TRACE	TRACE
ISOPENTANE	0.2	TRACE	TRACE
CYCLOPENTANE	0.1	TRACE	TRACE
HEXANES PLUS	0.3	TRACE	TRACE
NITROGEN	0.9	0.4	0.3
OXYGEN	0.0	0.0	0.0
ARGON	0.0	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.3	0.8	0.7
HELIUM	0.01	0.03	0.02
HEATING VALUE*	1091	1023	1029

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 55 SAMPLE 14451	INDEX 56 SAMPLE 14252	INDEX 57 SAMPLE 14441
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	EDDY
FIELD	CABIN LAKE	CORRAL DRAW	FORTY NINER RIDGE
WELL NAME	JAMES E NO. 1	CORRAL DRAW UNIT NO. 1	FORTY NINER RIDGE NO. 2
LOCATION	SEC. 11, T22S, R30E	SEC. 14, T25S, R29E	SEC. 21, T23S, R30E
OWNER	PHILLIPS PETROLEUM CO.	MOBIL OIL CORP.	SKELLY OIL CO.
COMPLETED	05/01/74	07/15/74	12/04/74
SAMPLED	09/12/75	01/07/75	08/19/75
FORMATION	PENN-MORROW	PENN-MORROW	PENN-MORROW
DEPTH, FEET	13323	13621	13805
WELLHEAD PRESSURE,PSIG	4679	5135	2800
OPEN FLOW, MCFD	3275	13694	2492
COMPONENT, MOLE PCT			
METHANE	96.0	97.6	96.5
ETHANE	2.1	0.6	1.4
PROPANE	0.4	0.1	0.3
N-BUTANE	0.1	0.0	TRACE
ISOBUTANE	0.1	0.0	0.1
N-PENTANE	0.0	0.0	TRACE
ISOPENTANE	TRACE	0.0	0.0
CYCLOPENTANE	TRACE	0.0	0.1
HEXANES PLUS	TRACE	0.0	0.1
NITROGEN	0.4	0.8	0.9
OXYGEN	0.0	0.1	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.9	0.8	0.6
HELIUM	0.02	0.02	0.02
HEATING VALUE*	1027	1002	1023

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 58 SAMPLE 14449	INDEX 59 SAMPLE 14450	INDEX 60 SAMPLE 14469
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	EDDY
FIELD	LA HUERTA	LA HUERTA	LOGAN DRAW
WELL NAME	TRACY A NO. 1	TRACY A NO. 1	ARCO B. FEDERAL GAS NO. 1
LOCATION	SEC. 33, T21S, R27E	SEC. 33, T21S, R27E	SEC. 25, T17S, R27E
OWNER	CITIES SERVICE OIL CO.	CITIES SERVICE OIL CO.	AMOCO PRODUCTION CO.
COMPLETED	04/15/74	04/15/74	03/03/74
SAMPLED	09/09/75	09/09/75	08/29/75
FORMATION	PENN-STRAWN	PENN-MORROW	PERM-WOLFCAMP
DEPTH, FEET	9950	10947	6756
WELLHEAD PRESSURE,PSIG	1700	1750	1953
OPEN FLOW, MCFD	11252	10085	34950
COMPONENT, MOLE PCT			
METHANE	94.9	94.8	75.8
ETHANE	2.8	2.9	11.8
PROPANE	0.6	0.6	5.6
N-BUTANE	0.1	0.1	1.4
ISOBUTANE	0.1	0.1	0.7
N-PENTANE	TRACE	TRACE	0.3
ISOPENTANE	0.1	TRACE	0.4
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.2
NITROGEN	0.5	0.5	3.7
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.8	0.9	0.1
HELIUM	0.02	0.02	0.08
HEATING VALUE*	1043	1040	1239

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 61 SAMPLE 14311	INDEX 62 SAMPLE 14321	INDEX 63 SAMPLE 14528
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	EDDY
FIELD	NOT GIVEN	NOT GIVEN	NOT GIVEN
WELL NAME	FANNING NO. 1	G. CONLEY FEDERAL NO. 1	FLINT NO. 1
LOCATION	SEC. 4, T19S, R26E	SEC. 33, T20S, R27E	SEC. 25, T17S, R25E
OWNER	SAMEDAN OIL CORP.	ATLANTIC RICHFIELD CO.	WESTERN OIL PRODUCERS, INC.
COMPLETED	11/09/73	05/23/74	04/18/74
SAMPLED	03/31/75	04/--/75	11/12/75
FORMATION	PENN-MORROW	PENN-MORROW	PENN-CISCO
DEPTH, FEET	9207	10672	6300
WELLHEAD PRESSURE,PSIG	2800	3647	1375
OPEN FLOW, MCFD	2900	3948	4000
COMPONENT, MOLE PCT			
METHANE	91.4	93.7	86.5
ETHANE	4.3	3.6	7.3
PROPANE	1.4	0.9	3.2
N-BUTANE	0.3	0.1	0.8
ISOBUTANE	0.3	0.2	0.5
N-PENTANE	0.1	TRACE	0.2
ISOPENTANE	0.2	0.1	0.2
CYCLOPENTANE	0.1	TRACE	0.1
HEXANES PLUS	0.2	0.1	0.1
NITROGEN	1.3	0.5	1.0
OXYGEN	0.0	0.0	0.0
ARGON	0.0	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.5	0.8	0.1
HELIUM	0.03	0.02	0.05
HEATING VALUE*	1086	1057	1160

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 64 SAMPLE 14435	INDEX 65 SAMPLE 14290	INDEX 66 SAMPLE 14428
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	EDDY
FIELD	QUAHADA	WILDCAT	WILDCAT
WELL NAME	BIG EDDY UNIT NO. 38	SANDY UNIT NO. 1	HAY HOLLOW NO. 1
LOCATION	SEC. 34, T21S, R29E	SEC. 24, T23S, R30E	SEC. 11, T26S, R27E
OWNER	PERRY R. BASS, INC.	PHILLIPS PETROLEUM CO.	GREAT WESTERN DRILLING CO.
COMPLETED	03/06/74	07/19/74	04/01/75
SAMPLED	08/13/75	03/12/75	07/07/75
FORMATION	PENN-MORROW	PENN-MORROW	PENN-STRAWN
DEPTH, FEET	13068	14494	11611
WELLHEAD PRESSURE,PSIG	950	4700	5650
OPEN FLOW, MCFD	8337	4000	10866
COMPONENT, MOLE PCT			
METHANE	95.5	96.8	94.2
ETHANE	2.3	1.3	3.4
PROPANE	0.5	0.2	0.6
N-BUTANE	0.1	TRACE	0.1
ISOBUTANE	0.1	TRACE	0.1
N-PENTANE	TRACE	TRACE	TRACE
ISOPENTANE	0.0	TRACE	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	0.1
NITROGEN	0.4	0.4	0.8
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.0	1.2	0.4
HELIUM	0.02	0.02	0.01
HEATING VALUE*	1028	1009	1047

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 67 SAMPLE 14436	INDEX 68 SAMPLE 14448	INDEX 69 SAMPLE 14508
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	EDDY
FIELD	WILDCAT	WILDCAT	WILDCAT
WELL NAME	BIG EDDY UNIT NO. 39	GOVERNMENT R NO. 1	ALLIED-COMM. NO. 1
LOCATION	SEC. 29, T21S, R28E	SEC. 14, T20S, R28E	SEC. 27, T20S, R27E
OWNER	PERRY R. BASS, INC.	CITIES SERVICE OIL CO.	PENROC OIL CORP.
COMPLETED	01/15/74	09/11/73	05/28/74
SAMPLED	08/13/75	09/09/75	10/24/75
FORMATION	PENN-MORROW	PENN-MORROW	PERM-WOLFCAMP
DEPTH, FEET	11762	11331	8540
WELLHEAD PRESSURE,PSIG	4025	3630	2167
OPEN FLOW, MCFD	3715	11217	3368
COMPONENT, MOLE PCT			
METHANE	94.0	94.5	77.8
ETHANE	3.4	3.3	12.5
PROPANE	0.7	0.7	5.1
N-BUTANE	0.1	0.1	1.2
ISOBUTANE	0.1	0.1	0.6
N-PENTANE	TRACE	TRACE	0.2
ISOPENTANE	0.1	0.1	0.4
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	TRACE	0.1
NITROGEN	0.6	0.4	2.0
OXYGEN	0.0	0.0	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.9	0.8	0.1
HELIUM	0.02	0.02	0.02
HEATING VALUE*	1047	1046	1236

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 70 SAMPLE 14509	INDEX 71 SAMPLE 14510	INDEX 72 SAMPLE 14549
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	EDDY	EDDY	LEA
FIELD	WILDCAT	WILDCAT	FOUR LAKES N
WELL NAME	ALLIED-COMM. NO. 1	ALLIED-COMM. NO. 1-B	SUN STATE NO. 1
LOCATION	SEC. 27, T20S, R27E	SEC. 27, T20S, R27E	SEC. 23, T11S, R34E
OWNER	PENROC OIL CORP.	PENROC OIL CORP.	APCO OIL CORP.
COMPLETED	05/08/74	NOT GIVEN	04/17/75
SAMPLED	10/24/75	10/24/75	12/16/75
FORMATION	PENN-MORROW	PERM- BONE SPRING	PENN-ATOKA
DEPTH, FEET	10622	NOT GIVEN	11518
WELLHEAD PRESSURE,PSIG	3203	NOT GIVEN	3400
OPEN FLOW, MCFD	2538	NOT GIVEN	2281
COMPONENT, MOLE PCT			
METHANE	90.8	95.4	81.0
ETHANE	4.6	2.5	9.4
PROPANE	1.2	0.5	5.1
N-BUTANE	0.3	0.1	1.1
ISOBUTANE	0.3	0.1	0.9
N-PENTANE	TRACE	TRACE	0.1
ISOPENTANE	0.2	TRACE	0.2
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	TRACE	0.1
NITROGEN	1.6	0.5	1.6
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	TRACE
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.9	0.7	0.4
HELIUM	0.02	0.03	0.02
HEATING VALUE*	1067	1031	1207

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 73 SAMPLE 14443	INDEX 74 SAMPLE 14312	INDEX 75 SAMPLE 14407
STATE	NEW MEXICO	NEW YORK	NEW YORK
COUNTY	SAN JUAN	ALLEGANY	CATTARAUGUS
FIELD	NAVAJO	WATER WELL	BRADFORD
WELL NAME	STAVER-NAVAJO NO. 1	NO. 1	COMBO
LOCATION	SEC. 34, T27N, R18W	BELMONT	OLEAN
OWNER	CONSOLIDATED OIL & GAS, INC.	N.Y. DEPT. TRANSPORTATION	THROPP OIL & GAS CO.
COMPLETED	06/21/75	NOT GIVEN	06/16/75
SAMPLED	08/15/75	04/02/75	06/16/75
FORMATION	MISS-	NOT GIVEN	NOT GIVEN
DEPTH, FEET	6796	400	NOT GIVEN
WELLHEAD PRESSURE,PSIG	2842	NOT GIVEN	NOT GIVEN
OPEN FLOW, MCFD	3349	NOT GIVEN	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	1.5	76.2	40.7
ETHANE	0.2	TRACE	14.8
PROPANE	TRACE	TRACE	6.4
N-BUTANE	0.1	0.0	4.1
ISOBUTANE	0.1	0.0	0.0
N-PENTANE	TRACE	0.0	0.0
ISOPENTANE	TRACE	0.0	20.8
CYCLOPENTANE	TRACE	0.0	0.3
HEXANES PLUS	0.1	0.0	0.0
NITROGEN	89.9	21.7	10.1
OXYGEN	0.0	1.4	0.9
ARGON	0.9	0.4	0.3
HYDROGEN	0.0	0.0	TRACE
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	0.3	1.7
HELIUM	7.16	TRACE	0.03
HEATING VALUE*	30	772	1879

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 76 SAMPLE 14459	INDEX 77 SAMPLE 14276	INDEX 78 SAMPLE 14380
STATE	NEW YORK	NEW YORK	NEW YORK
COUNTY	CAYUGA	RENSSELAER	STEFEN
FIELD	WATER WELL	NOT GIVEN	STONE HILL
WELL NAME	SAM OSARO NO. 1	JOHN BUONO WATER WELL	W. J. FULLER UNIT NO. 1
LOCATION	NOT GIVEN	ROUTE 9J, SCHODACK LANDING	SEC. D, HASKINVILLE QUAD.
OWNER	SAM OSARO	JOHN L. BUONO	CONSOLIDATED GAS SUPPLY CORP
COMPLETED	08/--/75	08/17/73	08/01/73
SAMPLED	NOT GIVEN	02/21/75	06/04/75
FORMATION	SILU- LOCKPORT	ORDO-BLACK SHALE	DEVO-HELDERBURG LIME
DEPTH, FEET	NOT GIVEN	383	3432
WELLHEAD PRESSURE,PSIG	NOT GIVEN	NOT GIVEN	1324
OPEN FLOW, MCFD	NOT GIVEN	NOT GIVEN	12169
COMPONENT, MOLE PCT			
METHANE	73.1	82.8	84.0
ETHANE	0.1	TRACE	11.0
PROPANE	0.0	TRACE	3.3
N-BUTANE	0.0	0.0	0.7
ISOBUTANE	0.0	0.0	0.3
N-PENTANE	0.0	0.0	0.2
ISOPENTANE	0.0	0.0	0.1
CYCLOPENTANE	0.0	0.0	TRACE
HEXANES PLUS	0.0	0.0	0.1
NITROGEN	24.9	16.7	0.3
OXYGEN	0.1	TRACE	0.0
ARGON	0.2	0.3	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.3	TRACE	TRACE
HELIUM	1.37	0.05	0.04
HEATING VALUE*	742	839	1185

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 79 SAMPLE 14454	INDEX 80 SAMPLE 14458	INDEX 81 SAMPLE 14378
STATE	NORTH DAKOTA	NORTH DAKOTA	OHIO
COUNTY	EMMONS	EMMONS	COLUMBIANA
FIELD	NOT GIVEN	NOT GIVEN	HOMEWORTH
WELL NAME	HUBER NO. 1	LOEB NO. 1	HOFFMAN NO. 1-2601
LOCATION	SEC. 2, T133N, R74W	SEC. 10, T133N, R75W	SEC. 33, KNOX TOWNSHIP
OWNER	KELSCH & DONLIN	KELSCH & DONLIN	EAST OHIO GAS CO.
COMPLETED	NOT GIVEN	NOT GIVEN	08/25/71
SAMPLED	NOT GIVEN	NOT GIVEN	05/29/75
FORMATION	CRET-MUDDY	CRET-MUDDY	ORDO- BEEKMANTOWN
DEPTH, FEET	NOT GIVEN	2276	8083
WELLHEAD PRESSURE,PSIG	NOT GIVEN	NOT GIVEN	2214
OPEN FLOW, MCFD	NOT GIVEN	NOT GIVEN	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	85.2	86.4	91.3
ETHANE	0.1	0.1	4.9
PROPANE	TRACE	TRACE	1.6
N-BUTANE	0.0	0.0	0.4
ISOBUTANE	0.0	0.0	0.4
N-PENTANE	0.0	0.0	0.2
ISOPENTANE	0.0	0.0	0.2
CYCLOPENTANE	0.0	0.0	TRACE
HEXANES PLUS	0.0	0.0	0.2
NITROGEN	13.4	12.2	0.8
OXYGEN	0.3	0.5	0.0
ARGON	0.2	0.1	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.7	0.5	0.1
HELIUM	0.05	0.04	0.03
HEATING VALUE*	865	877	1108

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 82 SAMPLE 14411	INDEX 83 SAMPLE 14412	INDEX 84 SAMPLE 14512
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	BECKHAM	BECKHAM	BECKHAM
FIELD	MAYFIELD NE	MAYFIELD NE	MAYFIELD SE
WELL NAME	PRICE NO. 1	ANNIE BRUNER NO. 1	CUPP NO. 1
LOCATION	SEC. 3, T10N, R25W	SEC. 33, T11N, R25W	SEC. 27, T10N, R26W
OWNER	UNION OIL CO. OF CALIF.	UNION OIL CO. OF CALIF.	HELMERICH & PAYNE INC.
COMPLETED	06/26/74	04/08/72	10/08/75
SAMPLED	07/07/75	07/07/75	10/27/75
FORMATION	PENN-MORROW	DEVO-HUNTON	CAMO-ARBUCKLE
DEPTH, FEET	19374	24065	16850
WELLHEAD PRESSURE,PSIG	11236	5490	6635
OPEN FLOW, MCFD	3650	NOT GIVEN	42995
COMPONENT, MOLE PCT			
METHANE	96.9	97.2	97.5
ETHANE	0.4	0.4	0.5
PROPANE	TRACE	0.1	0.1
N-BUTANE	0.0	0.0	TRACE
ISOBUTANE	0.0	0.0	0.0
N-PENTANE	0.0	0.0	TRACE
ISOPENTANE	0.0	0.0	TRACE
CYCLOPENTANE	0.0	0.0	TRACE
HEXANES PLUS	0.0	0.0	TRACE
NITROGEN	0.3	0.7	0.6
OXYGEN	TRACE	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.1	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.3	1.5	1.2
HELIUM	0.01	0.02	0.02
HEATING VALUE*	989	995	999

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 85 SAMPLE 14513	INDEX 86 SAMPLE 14384	INDEX 87 SAMPLE 14399
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	BECKHAM	BLAINE	BLAINE
FIELD	MAYFIELD SW	LONGDALE	LOYAL W
WELL NAME	CUPP "C" NO. 1	SMITH NO. 1	LORENZ NO. 3
LOCATION	SEC. 22, T10N, R26W	SEC. 7, T19N, R12W	SEC. 12, T17N, R10W
OWNER	HELMERICH & PAYNE INC.	TENNECO OIL CO.	UNIVERSAL RESOURCES CORP.
COMPLETED	10/09/75	11/12/74	NOT GIVEN
SAMPLED	10/27/75	06/13/75	06/25/75
FORMATION	CAMO-ARBUCKLE	MISS-	MISS-CHESTER
DEPTH, FEET	17907	8819	9000
WELLHEAD PRESSURE,PSIG	6620	2202	2700
OPEN FLOW, MCFD	60348	864	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	97.6	88.5	83.9
ETHANE	0.5	6.0	7.9
PROPANE	0.1	2.5	4.3
N-BUTANE	TRACE	0.8	1.3
ISOBUTANE	TRACE	0.4	0.6
N-PENTANE	TRACE	0.1	0.3
ISOPENTANE	TRACE	0.2	0.3
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	TRACE	0.1	0.2
NITROGEN	0.6	0.8	0.8
OXYGEN	0.0	0.0	TRACE
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.2	0.6	0.3
HELIUM	0.02	0.03	0.03
HEATING VALUE*	1000	1127	1207

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 88 SAMPLE 14327	INDEX 89 SAMPLE 14529	INDEX 90 SAMPLE 14255
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	BLAINE	BRYAN	CADDO
FIELD	WATONGA TREND	AYLESWORTH SE	APACHE E
WELL NAME	WHEELER UNIT NO. 1	GODFREY NO. 1	A. O. BELCHER NO. 1
LOCATION	SEC. 31, T17N, R10W	SEC. 21, T6S, R7E	SEC. 23, T5N, R11W
OWNER	CONTINENTAL OIL CO.	CLEARY PETROLEUM CO.	FOREST OIL CORP.
COMPLETED	03/19/75	07/22/75	10/01/73
SAMPLED	05/08/75	11/10/75	01/30/75
FORMATION	PENN-MORROW	ORDO-OIL CREEK	PENN-SPRINGER
DEPTH, FEET	8714	4171	18695
WELLHEAD PRESSURE,PSIG	5620	1720	13473
OPEN FLOW, MCFD	12150	6955	7275
COMPONENT, MOLE PCT			
METHANE	92.5	86.5	96.7
ETHANE	4.0	4.8	1.7
PROPANE	1.6	3.1	0.2
N-BUTANE	0.4	1.0	0.0
ISOBUTANE	0.3	0.3	0.0
N-PENTANE	TRACE	0.3	0.0
ISOPENTANE	0.2	0.3	0.0
CYCLOPENTANE	TRACE	0.1	0.0
HEXANES PLUS	0.1	0.2	0.0
NITROGEN	0.5	3.0	0.3
OXYGEN	TRACE	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.3	0.5	1.1
HELIUM	0.03	0.07	0.01
HEATING VALUE*	1087	1126	1015

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 91 SAMPLE 14468	INDEX 92 SAMPLE 14445	INDEX 93 SAMPLE 14372
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	CADDO	CADDO	CADDO
FIELD	COGAR	NOT GIVEN	ONEY NE
WELL NAME	KUHLMAN UNIT NO. 1	MARTIN NO. 1	CAREY NO. 1
LOCATION	SEC. 26, T10N, R9W	SEC. 4, T12N, R12W	SEC. 9, T9N, R11W
OWNER	AMOCO PRODUCTION CO.	MAY PETROLEUM, INC.	ARKLA EXPLORATION CO.
COMPLETED	04/16/75	12/02/74	04/15/75
SAMPLED	09/17/75	08/26/75	05/15/75
FORMATION	PENN-MORROW	PENN-RED FORK	MISS-CHESTER
DEPTH, FEET	12228	11484	15309
WELLHEAD PRESSURE,PSIG	6967	3760	9000
OPEN FLOW, MCFD	27640	2200	4400
COMPONENT, MOLE PCT			
METHANE	96.7	85.2	92.9
ETHANE	1.6	8.6	0.9
PROPANE	0.2	3.2	0.1
N-BUTANE	TRACE	0.5	0.0
ISOBUTANE	TRACE	0.5	0.0
N-PENTANE	TRACE	0.1	0.0
ISOPENTANE	TRACE	0.1	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	0.1	0.1	0.0
NITROGEN	0.3	0.8	3.7
OXYGEN	0.0	0.0	0.8
ARGON	TRACE	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.9	0.8	1.5
HELIUM	0.02	0.04	0.02
HEATING VALUE*	1019	1147	960

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 94 SAMPLE 14259	INDEX 95 SAMPLE 14405	INDEX 96 SAMPLE 14506
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	CANADIAN	CANADIAN	DEWEY
FIELD	NILES E	NILES SW	CESTOS SW
WELL NAME	DELANA NO. 1	ALICE JOHNSON NO. 1	KENNEDY BROTHERS NO. 1
LOCATION	SEC. 2, T12N, R10W	SEC. 26, T11N, R10W	SEC. 35, T19N, R19W
OWNER	TENNECO OIL CO.	SAMEDAN OIL CORP.	JONES & PELLOW OIL CO.
COMPLETED	01/06/74	12/17/74	06/27/75
SAMPLED	02/15/75	06/30/75	10/24/75
FORMATION	PENN-MORROW	PENN-MORROW	PENN-MORROW
DEPTH, FEET	11018	12314	10160
WELLHEAD PRESSURE,PSIG	6272	6222	NOT GIVEN
OPEN FLOW, MCFD	33800	6000	26550
COMPONENT, MOLE PCT			
METHANE	92.7	88.7	96.0
ETHANE	3.7	5.0	1.6
PROPANE	1.5	2.9	0.4
N-BUTANE	0.3	1.0	0.1
ISOBUTANE	0.3	0.4	0.1
N-PENTANE	TRACE	0.3	TRACE
ISOPENTANE	0.2	0.6	TRACE
CYCLOPENTANE	0.1	0.2	TRACE
HEXANES PLUS	0.2	0.4	0.1
NITROGEN	0.5	0.0	0.5
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.6	0.3	1.3
HELIUM	0.02	0.02	0.04
HEATING VALUE*	1087	1177	1023

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 97 SAMPLE 14499	INDEX 98 SAMPLE 14299	INDEX 99 SAMPLE 14300
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	DEWEY	DEWEY	DEWEY
FIELD	LEONEL SE	WILDCAT	WILDCAT
WELL NAME	BOND NO. 1	KATY ZO WOMACH UNIT NO. 1	MURRY NO. 1
LOCATION	SEC. 12, T17N, R14W	SEC. 25, T17N, R14W	SEC. 7, T18N, R14W
OWNER	TEXAS OIL & GAS CORP.	AMOCO PRODUCTION CO.	SNEE & EBERLY
COMPLETED	NOT GIVEN	10/15/74	09/06/74
SAMPLED	10/24/75	03/18/75	03/18/74
FORMATION	NOT GIVEN	PENN-MORROW	PENN-MORROW
DEPTH, FEET	NOT GIVEN	9527	9135
WELLHEAD PRESSURE,PSIG	NOT GIVEN	5552	2000
OPEN FLOW, MCFD	NOT GIVEN	7503	5400
COMPONENT, MOLE PCT			
METHANE	88.0	88.2	82.8
ETHANE	6.7	6.7	8.4
PROPANE	2.8	2.9	4.6
N-BUTANE	0.6	0.5	1.1
ISOBUTANE	0.4	0.4	0.7
N-PENTANE	0.1	TRACE	0.2
ISOPENTANE	0.2	0.2	0.4
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.3
NITROGEN	0.5	0.6	0.9
OXYGEN	0.0	0.0	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.6	0.3	0.4
HELIUM	0.04	0.04	0.04
HEATING VALUE*	1136	1133	1214

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 100 SAMPLE 14403	INDEX 101 SAMPLE 14306	INDEX 102 SAMPLE 14503
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	ELLIS	ELLIS	GRADY
FIELD	CHANEY N	SHATTUCK FIELD	CHICKASHA NE
WELL NAME	HARDY NO. 1	WALTON NO. 1	CIRCLE BAR K
LOCATION	SEC. 7, T23N, R24W	SEC. 15, T21N, R25W	SEC. 24, T7N, R7W
OWNER	ZOLLER & DANNEBERG, INC.	ARKLA EXPLORATION CO.	COTTON PETROLEUM CORP.
COMPLETED	03/01/75	NOT GIVEN	09/01/75
SAMPLED	06/--/75	03/21/75	10/17/75
FORMATION	PENN-MORROW	PENN-MORROW	PENN-SPRINGER
DEPTH, FEET	8292	9430	12930
WELLHEAD PRESSURE,PSIG	2100	3100	7500
OPEN FLOW, MCFD	4100	NOT GIVEN	30000
COMPONENT, MOLE PCT			
METHANE	86.0	91.0	86.4
ETHANE	6.5	4.5	7.4
PROPANE	3.1	1.7	3.1
N-BUTANE	0.9	0.5	0.6
ISOBUTANE	0.6	0.3	0.4
N-PENTANE	0.2	0.1	0.1
ISOPENTANE	0.7	0.2	0.4
CYCLOPENTANE	0.2	0.1	0.1
HEXANES PLUS	0.4	0.2	0.3
NITROGEN	0.7	0.5	0.7
OXYGEN	0.0	0.0	0.0
ARGON	0.0	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.8	1.0	0.5
HELIUM	0.05	0.04	0.02
HEATING VALUE*	1185	1100	1162

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 103 SAMPLE 14538	INDEX 104 SAMPLE 14423	INDEX 105 SAMPLE 14471
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	LEFLORE	LEFLORE	LOVE
FIELD	CEDARS	PENO	ENVILLE NW
WELL NAME	CLAWSON NO. 1	KERR ESTATE NO. 1	STATE TRACT 5 NO. 1
LOCATION	SEC. 34, T10N, R27E	SEC. 27, T10N, R27E	SEC. 13, T6S, R2E
OWNER	LEAR PETROLEUM CORP.	CHEYENNE PETROLEUM CO.	APCO OIL CORP.
COMPLETED	06/23/75	NOT GIVEN	05/09/75
SAMPLED	11/26/75	07/25/75	09/18/75
FORMATION	PENN-CROMWELL	PENN-ATOKA	PENN-SPRINGER
DEPTH, FEET	6203	5904	9526
WELLHEAD PRESSURE,PSIG	706	905	4715
OPEN FLOW, MCFD	6300	3758	3147
COMPONENT, MOLE PCT			
METHANE	96.0	93.5	93.1
ETHANE	1.2	1.3	3.2
PROPANE	0.2	0.1	1.6
N-BUTANE	0.0	0.0	0.3
ISOBUTANE	0.0	0.0	0.2
N-PENTANE	0.0	0.0	0.1
ISOPENTANE	0.0	0.0	0.1
CYCLOPENTANE	0.0	0.0	TRACE
HEXANES PLUS	0.0	0.0	0.1
NITROGEN	0.8	2.6	0.9
OXYGEN	0.0	0.2	0.0
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.6	2.2	0.4
HELIUM	0.12	0.10	0.04
HEATING VALUE*	999	973	1072

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 106 SAMPLE 14542	INDEX 107 SAMPLE 14543	INDEX 108 SAMPLE 14396
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	MAJOR	MAJOR	OSAGE
FIELD	SEILING NE	SEILING NE	KEYSTONE E
WELL NAME	JELLISON NO. 1-6	JELLISON NO. 1-6	REVCO-M NO. 1
LOCATION	SEC. 6, T20N, R15W	SEC. 6, T20N, R15W	SEC. 28, T20N, R10E
OWNER	PIONEER PRODUCTION CORP.	PIONEER PRODUCTION CORP.	KEWANEE OIL CO.
COMPLETED	NOT GIVEN	NOT GIVEN	04/29/75
SAMPLED	12/11/75	12/11/75	06/20/75
FORMATION	DEVO-HUNTON	MISS-CHESTER	PENN-TUCKER
DEPTH, FEET	9895	7996	2324
WELLHEAD PRESSURE,PSIG	1600	1300	830
OPEN FLOW, MCFD	4179	1464	12300
COMPONENT, MOLE PCT			
METHANE	94.1	77.7	76.1
ETHANE	2.4	9.6	6.7
PROPANE	0.7	6.2	3.6
N-BUTANE	0.2	2.2	0.8
ISOBUTANE	0.1	1.4	0.4
N-PENTANE	0.1	0.4	0.1
ISOPENTANE	0.1	0.9	0.1
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	0.1	0.2	0.1
NITROGEN	1.5	1.0	11.9
OXYGEN	0.0	0.0	0.2
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.7	0.3	TRACE
HELIUM	0.04	0.04	0.08
HEATING VALUE*	1038	1311	1038

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 109 SAMPLE 14307	INDEX 110 SAMPLE 14325	INDEX 111 SAMPLE 14326
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	OSAGE	PITTSBURG	PITTSBURG
FIELD	MYERS DOME	ULAN S	ULAN S
WELL NAME	LEBSACK NO. 1-G	FINAMORE NO. 1	FINAMORE NO. 1
LOCATION	SEC. 11, T26N, R8E	SEC. 32, T7N, R14E	SEC. 32, T7N, R14E
OWNER	SERVICE DRILLING CO.	KWB OIL PROPERTY MGMT., INC.	KWB OIL PROPERTY MGMT., INC.
COMPLETED	11/15/74	NOT GIVEN	NOT GIVEN
SAMPLED	03/--/75	04/20/75	04/20/75
FORMATION	PENN-BURGESS	PENN-WAPANUCKA	PENN-CROMWELL
DEPTH, FEET	2500	6692	7065
WELLHEAD PRESSURE,PSIG	780	17	1715
OPEN FLOW, MCFD	4000	1600	2600
COMPONENT, MOLE PCT			
METHANE	78.9	93.6	95.2
ETHANE	6.5	0.6	0.8
PROPANE	3.3	0.1	0.1
N-BUTANE	0.8	0.0	0.0
ISOBUTANE	0.5	0.0	0.0
N-PENTANE	0.1	0.0	0.0
ISOPENTANE	0.3	0.0	0.0
CYCLOPENTANE	TRACE	0.0	0.0
HEXANES PLUS	0.1	0.0	0.0
NITROGEN	8.7	2.2	0.7
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.3	3.4	3.2
HELIUM	0.36	0.07	0.05
HEATING VALUE*	1067	962	981

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 112 SAMPLE 14514	INDEX 113 SAMPLE 14309	INDEX 114 SAMPLE 14547
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	ROGER MILLS	ROGER MILLS	SEMINOLE
FIELD	BLACK KETTLE	REYDON	LITTLE RIVER E
WELL NAME	HUNT CROSS NO. 1	ROBERTSON NO. 1-A	JOHNNY WOLF NO. 3
LOCATION	SEC. 22, T13N, R24W	SEC. 1, T13N, R26W	SEC. 30, T8N, R6E
OWNER	EL PASO NATURAL GAS CO.	EL PASO NATURAL GAS CO.	VIKING PETROLEUM CO.
COMPLETED	06/11/75	01/25/75	05/05/75
SAMPLED	10/31/75	03/31/75	12/10/75
FORMATION	PENN-MORROW	PENN-MORROW	PENN-CROMWELL
DEPTH, FEET	15530	15136	3312
WELLHEAD PRESSURE,PSIG	12220	9413	470
OPEN FLOW, MCFD	19742	NOT GIVEN	6903
COMPONENT, MOLE PCT			
METHANE	97.1	96.6	83.9
ETHANE	0.5	0.6	5.4
PROPANE	0.1	0.1	2.4
N-BUTANE	TRACE	0.1	0.6
ISOBUTANE	TRACE	TRACE	0.5
N-PENTANE	TRACE	TRACE	0.2
ISOPENTANE	TRACE	TRACE	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	0.1
NITROGEN	0.3	0.7	6.3
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.9	1.8	0.3
HELIUM	0.02	0.02	0.08
HEATING VALUE*	995	995	1064

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 115 SAMPLE 14420	INDEX 116 SAMPLE 14500	INDEX 117 SAMPLE 14426
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	TEXAS	TEXAS	TEXAS
FIELD	CARTHAGE NE	LIBERAL SW	RICHLAND CENTER S
WELL NAME	ETTA NILES NO. 4	BLASER NO. 1	ECKSTEIN A-2
LOCATION	SEC. 32, T6N, R10ECM	SEC. 13, T6N, R19ECM	SEC. 27, T5N, R12ECM
OWNER	MAURICE L. BROWN CO.	BASIN PETROLEUM CORP.	CITIES SERVICE OIL CO.
COMPLETED	11/09/74	04/03/75	07/08/75
SAMPLED	07/26/75	10/21/75	08/06/75
FORMATION	PENN-KEYES	PENN-KEYES	PENN-CHEROKEE
DEPTH, FEET	4605	6400	5078
WELLHEAD PRESSURE,PSIG	427	1170	NOT GIVEN
OPEN FLOW, MCFD	5568	10902	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	76.7	89.6	80.5
ETHANE	4.1	4.0	8.1
PROPANE	0.7	2.1	4.0
N-BUTANE	0.1	0.6	1.0
ISOBUTANE	0.1	0.4	0.4
N-PENTANE	0.1	0.1	0.2
ISOPENTANE	TRACE	0.3	0.2
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	TRACE	0.2	0.1
NITROGEN	12.2	2.3	5.2
OXYGEN	0.0	TRACE	0.1
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	5.1	0.3	0.0
HELIUM	0.92	0.15	0.15
HEATING VALUE*	880	1099	1134

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 118 SAMPLE 14427	INDEX 119 SAMPLE 14495	INDEX 120 SAMPLE 14303
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	TEXAS	TEXAS	WASHITA
FIELD	RICHLAND CENTER S	TRACY SE	ELK CITY
WELL NAME	ECKSTEIN A-2	STONEBRAKER P NO. 2	SPRADLIN NO. 1
LOCATION	SEC. 27, T5N, R12ECM	SEC. 2, T3N, R12ECM	SEC. 35, T10N, R20W
OWNER	CITIES SERVICE OIL CO.	CITIES SERVICE OIL CO.	EL PASO NATURAL GAS CO.
COMPLETED	07/08/75	09/05/75	11/11/74
SAMPLED	08/06/75	10/17/75	03/19/75
FORMATION	PENN-KEYES	PENN-MORROW	PENN-ATOKA
DEPTH, FEET	5870	5993	13458
WELLHEAD PRESSURE,PSIG	NOT GIVEN	1340	7600
OPEN FLOW, MCFD	NOT GIVEN	4844	11514
COMPONENT, MOLE PCT			
METHANE	75.0	87.4	96.6
ETHANE	5.8	5.9	1.9
PROPANE	3.6	2.9	0.4
N-BUTANE	0.9	0.7	0.0
ISOBUTANE	0.6	0.3	0.0
N-PENTANE	0.2	0.2	0.0
ISOPENTANE	0.2	0.2	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	0.1	0.1	0.0
NITROGEN	13.5	2.0	0.4
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.0	0.2	0.7
HELIUM	0.32	0.13	0.02
HEATING VALUE*	1030	1122	1023

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 121 SAMPLE 14324	INDEX 122 SAMPLE 14254	INDEX 123 SAMPLE 14387
STATE	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY	WOODS	WOODWARD	WOODWARD
FIELD	BRACE E	CEDARDALE NE	QUINLAN
WELL NAME	BOLAND NO. 1	COPELAND NO. 24-1	BURKHART NO. 1
LOCATION	SEC. 29, T26N, R16W	SEC. 24, T24N, R18W	SEC. 31, T25N, R17W
OWNER	TUTHILL & BARBEE	JONES & PELLOW OIL CO.	WALTER DUNCAN
COMPLETED	09/16/74	11/19/74	09/24/74
SAMPLED	05/06/75	01/19/75	06/17/75
FORMATION	PENN-RED FORK	MISS-CHESTER	MISS-CHESTER
DEPTH, FEET	5903	6510	6178
WELLHEAD PRESSURE,PSIG	1890	2775	1750
OPEN FLOW, MCFD	6878	3084	900
COMPONENT, MOLE PCT			
METHANE	90.7	92.7	92.8
ETHANE	3.9	3.5	4.0
PROPANE	1.7	1.5	1.3
N-BUTANE	0.6	0.4	0.4
ISOBUTANE	0.4	0.4	0.2
N-PENTANE	0.2	0.1	0.1
ISOPENTANE	0.2	0.2	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.2	0.1	0.1
NITROGEN	2.0	0.5	0.8
OXYGEN	0.0	TRACE	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	0.3	0.2
HELIUM	0.09	0.04	0.05
HEATING VALUE*	1094	1086	1079

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 124 SAMPLE 14424	INDEX 125 SAMPLE 14521	INDEX 126 SAMPLE 14522
STATE	PENNSYLVANIA	PENNSYLVANIA	PENNSYLVANIA
COUNTY	MCKEAN	SCHUYLKILL	SCHUYLKILL
FIELD	BRADFORD	ANTHRACITE COALFIELD	ANTHRACITE COALFIELD
WELL NAME	AMOCO-WITCO NO. 1	PARKER NO. 2	PARKER NO. 2
LOCATION	SEC. 1, BRADFORD QUADRANGLE	SWATARA COAL TRACT	SWATARA COAL TRACT
OWNER	AMOCO PRODUCTION CO.	PARKERS SWATARA COAL CO.	PARKERS SWATARA COAL CO.
COMPLETED	07/30/74	09/16/75	10/19/75
SAMPLED	08/01/75	09/27/75	10/30/75
FORMATION	DEVO-ONONDAGA	PENN-	-COAL SEAM
DEPTH, FEET	5184	602	602
WELLHEAD PRESSURE,PSIG	2250	NOT GIVEN	NOT GIVEN
OPEN FLOW, MCFD	3000	NOT GIVEN	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	82.1	93.7	99.0
ETHANE	11.7	0.1	TRACE
PROPANE	3.6	TRACE	TRACE
N-BUTANE	0.8	0.0	0.0
ISOBUTANE	0.6	0.0	0.0
N-PENTANE	0.2	0.0	0.0
ISOPENTANE	0.1	0.0	0.0
CYCLOPENTANE	TRACE	0.0	0.0
HEXANES PLUS	0.2	0.0	0.0
NITROGEN	0.6	6.0	0.9
OXYGEN	TRACE	0.0	0.0
ARGON	0.0	0.1	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.0	0.1	0.1
HELIUM	0.02	TRACE	TRACE
HEATING VALUE*	1205	951	1003

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 127 SAMPLE 14526	INDEX 128 SAMPLE 14280	INDEX 129 SAMPLE 14379
STATE	PENNSYLVANIA	TEXAS	TEXAS
COUNTY	SCHUYLKILL	BEE	BEE
FIELD	SOUTHERN ANTHRACITE	BURKE RIDGE	CADIZ
WELL NAME	PARKER NO. 2	SAMUEL DENVER CHESTNUTT NO.1	R. R. LAWSON NO. 1
LOCATION	NEAR MINERSVILLE PA.	GARRETT ROACH SUR. A-59	A. C. GILLETT SUR. A-1203
OWNER	PARKERS SWATARA COAL CO.	EXXON CO., U.S.A.	HARKINS & CO.
COMPLETED	NOT GIVEN	06/20/73	07/04/73
SAMPLED	11/03/75	03/01/75	05/30/75
FORMATION	PENN-	-GRETA	EOCE-WILCOX
DEPTH, FEET	602	1914	9006
WELLHEAD PRESSURE,PSIG	NOT GIVEN	573	3159
OPEN FLOW, MCFD	NOT GIVEN	860	9400
COMPONENT, MOLE PCT			
METHANE	98.7	98.7	81.1
ETHANE	0.1	0.1	7.6
PROPANE	TRACE	TRACE	4.2
N-BUTANE	0.0	0.0	1.0
ISOBUTANE	0.0	0.0	0.7
N-PENTANE	0.0	0.0	0.2
ISOPENTANE	0.0	0.0	0.5
CYCLOPENTANE	0.0	0.0	0.1
HEXANES PLUS	0.0	0.0	0.2
NITROGEN	1.1	1.0	0.3
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.1	4.2
HELIUM	TRACE	0.01	0.01
HEATING VALUE*	1002	1002	1168

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 130 SAMPLE 14532	INDEX 131 SAMPLE 14516	INDEX 132 SAMPLE 14371
STATE	TEXAS	TEXAS	TEXAS
COUNTY	BRAZORIA	BRAZORIA	CAMERON
FIELD	MARTIN RANCH	RATTLESNAKE MOUND	HOLLY BEACH
WELL NAME	T. MARTIN NO. 4	SWEET NO. 1-A	STATE TRACT 713 NO. 2-L
LOCATION	PERRY & MARTIN SUR. A-106	ALFRED SWINGLE SUR. A-369	LAGUNA MADRE BLOCK 713
OWNER	GENERAL CRUDE OIL CO.	GENERAL CRUDE OIL CO.	TEXACO INC.
COMPLETED	02/14/74	03/27/75	11/09/73
SAMPLED	11/05/75	10/22/75	05/13/75
FORMATION	OLIG-FRIO	MIOC-	MIOC-LM-8
DEPTH, FEET	14888	7017	7495
WELLHEAD PRESSURE,PSIG	9450	2975	2900
OPEN FLOW, MCFD	13645	NOT GIVEN	8711
COMPONENT, MOLE PCT			
METHANE	91.6	93.0	95.8
ETHANE	3.6	3.4	2.1
PROPANE	0.9	1.4	0.3
N-BUTANE	0.2	0.3	0.0
ISOBUTANE	0.2	0.6	0.0
N-PENTANE	TRACE	0.1	0.0
ISOPENTANE	0.1	0.1	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	TRACE	0.2	0.0
NITROGEN	0.4	0.5	1.5
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.9	0.2	0.2
HELIUM	TRACE	TRACE	0.01
HEATING VALUE*	1034	1088	1016

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 133 SAMPLE 14263	INDEX 134 SAMPLE 14446	INDEX 135 SAMPLE 14284
STATE	TEXAS	TEXAS	TEXAS
COUNTY	COLORADO	CRANE	DE WITT
FIELD	PRAIRIE BELL	T. E. BARR	ARNECKEVILLE
WELL NAME	JOHN HASTEDT NO. 1	REED BUTLER NO. 1	FLORA PURCELL NO. 1-T
LOCATION	BENJAMIN PARKER SUR. A-450	SEC. 10, BLK. 4, H&TC SUR.	MUMFORD SUR. A-226
OWNER	PRAIRIE PRODUCING CO.	TEXAS OIL & GAS CORP.	LONE STAR PRODUCING CO.
COMPLETED	03/09/73	04/01/74	01/02/73
SAMPLED	02/--/75	08/29/75	03/05/75
FORMATION	EOCE-WILCOX	PERM-WICHITA-ALBANY	EOCE-YEGUA
DEPTH, FEET	11012	5458	5353
WELLHEAD PRESSURE,PSIG	4320	2368	1647
OPEN FLOW, MCFD	8700	8250	435
COMPONENT, MOLE PCT			
METHANE	82.2	95.6	90.4
ETHANE	7.8	2.4	5.0
PROPANE	3.7	0.5	2.2
N-BUTANE	0.8	0.1	0.5
ISOBUTANE	0.7	0.1	0.6
N-PENTANE	0.2	0.1	0.1
ISOPENTANE	0.3	TRACE	0.3
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	0.5	0.8	0.7
OXYGEN	TRACE	0.0	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	3.7	0.3	0.2
HELIUM	0.01	0.03	0.01
HEATING VALUE*	1145	1041	1125

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 136 SAMPLE 14285	INDEX 137 SAMPLE 14404	INDEX 138 SAMPLE 14304
STATE	TEXAS	TEXAS	TEXAS
COUNTY	DE WITT	EDWARDS	EDWARDS
FIELD	ARNECKEVILLE	PAN GIL RANCH	ROY BAKER
WELL NAME	FLORA PURCELL NO. 1-C	MORRIS NO. 13-1	ROY BAKER NO. 1
LOCATION	MUMFORD SUR. A-226	SEC. 13, AB&M SUR	SEC. 15, A-1352, WASH.CO. RR
OWNER	LONE STAR PRODUCING CO.	MITCHELL ENERGY CORP.	NORTH AMERICAN ROYALTIES,INC
COMPLETED	01/02/73	01/23/73	09/01/73
SAMPLED	03/05/75	07/02/75	03/18/75
FORMATION	EOCE-YEGUA	PENN-CANYON	PENN-CANYON
DEPTH, FEET	4867	2262	3221
WELLHEAD PRESSURE,PSIG	1407	580	450
OPEN FLOW, MCFD	5600	2200	3400
COMPONENT, MOLE PCT			
METHANE	90.7	88.9	88.8
ETHANE	5.0	2.3	2.2
PROPANE	2.2	1.1	1.2
N-BUTANE	0.4	0.3	0.2
ISOBUTANE	0.6	0.2	0.3
N-PENTANE	0.1	TRACE	TRACE
ISOPENTANE	0.3	0.1	0.1
CYCLOPENTANE	0.1	TRACE	TRACE
HEXANES PLUS	0.2	0.1	TRACE
NITROGEN	0.3	6.5	6.6
OXYGEN	0.0	0.1	TRACE
ARGON	0.0	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.2	TRACE	0.1
HELIUM	0.01	0.31	0.25
HEATING VALUE*	1130	997	991

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 139 SAMPLE 14279	INDEX 140 SAMPLE 14400	INDEX 141 SAMPLE 14375
STATE	TEXAS	TEXAS	TEXAS
COUNTY	GALVESTON	HANSFORD	HARDIN
FIELD	POINT BOLIVAR N	LANDIS	BATSON
WELL NAME	NPBFSU NO. 3	LANDIS NO. 1	C. G. HOOKS NO. 5
LOCATION	STATE TR. 342 GALVESTON BAY	SEC. 34, BLK. R.B.&B. SUR.	JOSE C. LOPEZ SUR. A-360
OWNER	HOUSTON OIL & MINERALS CORP.	R. L. BURNS CORP.	AMOCO PRODUCTION CO.
COMPLETED	09/03/73	--/--/74	04/24/73
SAMPLED	03/03/75	06/--/75	05/19/75
FORMATION	OLIG-FRIO	PENN-CLEVELAND	EOCE-YEGUA
DEPTH, FEET	12281	6099	9192
WELLHEAD PRESSURE,PSIG	7470	1468	1290
OPEN FLOW, MCFD	636074	5600	400
COMPONENT, MOLE PCT			
METHANE	83.3	81.7	68.2
ETHANE	8.2	6.3	4.5
PROPANE	3.6	3.8	2.8
N-BUTANE	0.8	1.3	0.6
ISOBUTANE	1.1	0.5	0.6
N-PENTANE	0.2	0.3	TRACE
ISOPENTANE	0.3	0.4	0.2
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	0.3	0.2	0.1
NITROGEN	0.0	4.8	22.3
OXYGEN	0.0	0.4	0.0
ARGON	0.0	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.4	0.1	0.5
HELIUM	TRACE	0.20	0.06
HEATING VALUE*	1185	1144	898

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 142 SAMPLE 14520	INDEX 143 SAMPLE 14497	INDEX 144 SAMPLE 14251
STATE	TEXAS	TEXAS	TEXAS
COUNTY	HARDIN	HARRIS	HARRIS
FIELD	SOUR LAKE	BAMMEL S	RENEE
WELL NAME	DISHMAN-LUCAS NO. 1	JOHN EHRHARDT NO. 2	KELLY BROCK B NO. 1
LOCATION	ISAAC BRIDGE SUR. A-132	SEC. 6, BLK. 4, WC&RRCO. SUR	RICHARD & VINCE SUR. A-76
OWNER	SUN OIL CO.	PETROLEUM CORP. OF TEXAS	INEXCO OIL CO.
COMPLETED	07/27/74	02/12/73	07/30/74
SAMPLED	10/31/75	10/21/75	01/06/75
FORMATION	EOCE-YEGUA	EOCE-YEGUA	OLIG-VICKSBURG
DEPTH, FEET	9777	6727	8602
WELLHEAD PRESSURE,PSIG	1900	1400	2150
OPEN FLOW, MCFD	174	10000	8740
COMPONENT, MOLE PCT			
METHANE	87.0	90.1	94.2
ETHANE	6.2	5.1	3.1
PROPANE	3.5	1.9	1.1
N-BUTANE	0.7	0.4	0.2
ISOBUTANE	0.7	0.4	0.3
N-PENTANE	0.1	0.1	TRACE
ISOPENTANE	0.4	0.2	0.2
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	0.3	1.1	0.3
OXYGEN	0.0	0.1	TRACE
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.9	0.4	0.2
HELIUM	TRACE	0.01	TRACE
HEATING VALUE*	1157	1098	1073

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 145 SAMPLE 14288	INDEX 146 SAMPLE 14289	INDEX 147 SAMPLE 14444
STATE	TEXAS	TEXAS	TEXAS
COUNTY	HEMPHILL	HEMPHILL	HEMPHILL
FIELD	CANADIAN SE	CANADIAN SE	HEMPHILL
WELL NAME	LOUISE HOOVER C NO. 1-229	LOUISE HOOVER C NO. 1-229	ABRAHAM B NO. 1
LOCATION	SEC. 229, BLK. C,G&MMB&A SUR	SEC. 229, BLK. C,G&MMB&A SUR	SEC. 26, BLK. 1, I&GM SUR.
OWNER	DIAMOND SHAMROCK CORP.	DIAMOND SHAMROCK CORP.	ANADARKO PRODUCTION CO.
COMPLETED	12/02/74	12/02/74	NOT GIVEN
SAMPLED	03/07/75	03/07/75	08/26/75
FORMATION	PENN-DOUGLAS	PENN-CHEROKEE	PERM-GRANITE WASH
DEPTH, FEET	7606	10700	NOT GIVEN
WELLHEAD PRESSURE,PSIG	1782	2165	1800
OPEN FLOW, MCFD	5000	11500	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE	88.0	85.8	82.0
ETHANE	6.3	8.1	9.9
PROPANE	2.5	3.0	4.2
N-BUTANE	0.5	0.7	0.9
ISOBUTANE	0.4	0.6	0.6
N-PENTANE	0.1	0.2	0.2
ISOPENTANE	0.2	0.1	0.3
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	1.3	0.6	1.1
OXYGEN	0.0	TRACE	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.4	0.8	0.7
HELIUM	0.08	0.03	0.03
HEATING VALUE*	1117	1154	1194

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 148 SAMPLE 14421	INDEX 149 SAMPLE 14256	INDEX 150 SAMPLE 14257
STATE	TEXAS	TEXAS	TEXAS
COUNTY	HEMPHILL	HIDALGO	HIDALGO
FIELD	NOT GIVEN	ELSA S	ELSA S
WELL NAME	ARRINGTON B NO. 1	DIETRICH NO. 1	DIETRICH NO. 1
LOCATION	SEC. 45, BLK. A-2, H&GN SUR.	LLANO GRANDE GRANT, A-54	LLANO GRANDE GRANT, A-54
OWNER	MCCULLOCH OIL CORP.	J. M. HUBER CORP.	J. M. HUBER CORP.
COMPLETED	NOT GIVEN	04/30/73	04/30/73
SAMPLED	07/--/75	02/09/75	02/09/75
FORMATION	PERM-GRANITE WASH	OLIG-FRIO F7400 SAND	OLIG-FRIO 7250 SAND
DEPTH, FEET	10814	7384	7242
WELLHEAD PRESSURE,PSIG	NOT GIVEN	3168	2550
OPEN FLOW, MCFD	NOT GIVEN	7600	7600
COMPONENT, MOLE PCT			
METHANE	84.2	95.8	95.8
ETHANE	8.7	2.6	2.6
PROPANE	3.7	0.5	0.5
N-BUTANE	0.9	0.1	0.1
ISOBUTANE	0.5	0.2	0.2
N-PENTANE	0.1	TRACE	TRACE
ISOPENTANE	0.4	TRACE	TRACE
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	0.9	0.6	0.6
OXYGEN	TRACE	0.0	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.4	0.1	0.1
HELIUM	0.03	0.01	0.01
HEATING VALUE*	1178	1045	1045

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 151 SAMPLE 14295	INDEX 152 SAMPLE 14292	INDEX 153 SAMPLE 14297
STATE	TEXAS	TEXAS	TEXAS
COUNTY	JIM WELLS	JIM WELLS	JIM WELLS
FIELD	EL PAR	T. C. B.	T. C. B.
WELL NAME	KING RANCH MORGAN NO. M-34	TIJERINA NO. J-120	TIJERINA NO. J-120
LOCATION	SANTA GERTRUDIS GRANT	ALICE G. KING SUR. 240	A. G. KING SUR. 240, A-267
OWNER	EXXON CO., U.S.A.	EXXON CO., U.S.A.	EXXON CO., U.S.A.
COMPLETED	05/27/73	12/16/72	12/16/72
SAMPLED	03/14/75	03/14/75	03/14/75
FORMATION	NOT GIVEN	OLIG-VICKSBURG	OLIG-VICKSBURG
DEPTH, FEET	4449	8375	7970
WELLHEAD PRESSURE,PSIG	NOT GIVEN	5191	5092
OPEN FLOW, MCFD	NOT GIVEN	12200	11000
COMPONENT, MOLE PCT			
METHANE	93.3	68.7	90.0
ETHANE	4.0	13.3	5.4
PROPANE	1.4	8.4	2.1
N-BUTANE	0.2	2.0	0.4
ISOBUTANE	0.3	2.2	0.6
N-PENTANE	TRACE	0.4	0.1
ISOPENTANE	0.1	0.5	0.2
CYCLOPENTANE	TRACE	0.1	0.1
HEXANES PLUS	0.1	0.4	0.2
NITROGEN	0.6	2.6	0.2
OXYGEN	0.0	0.6	0.0
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	TRACE
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.6	0.5
HELIUM	TRACE	TRACE	TRACE
HEATING VALUE*	1079	1356	1123

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 154 SAMPLE 14294	INDEX 155 SAMPLE 14293	INDEX 156 SAMPLE 14296
STATE	TEXAS	TEXAS	TEXAS
COUNTY	KENEDY	KENEDY	KENEDY
FIELD	CALANDRIA	RITA	RITA
WELL NAME	SAN JOSE DELA PARRA NO. 2	S. K. EAST NO. 59	MRS. S. K. EAST NO. 59
LOCATION	SAN JUAN DE CARRICITOS GR	LOS FINADOS GRANT A-36	LOS FINADOS GRANT A-36
OWNER	EXXON CO., U.S.A.	EXXON CO., U.S.A.	EXXON CO., U.S.A.
COMPLETED	03/27/72	02/06/73	02/06/73
SAMPLED	03/13/75	03/13/75	03/13/75
FORMATION	OLIG-FRIO	-A-36	OLIG-FRIO
DEPTH, FEET	8603	3707	4650
WELLHEAD PRESSURE,PSIG	4226	1508	1304
OPEN FLOW, MCFD	12000	NOT GIVEN	5348
COMPONENT, MOLE PCT			
METHANE	93.8	93.4	94.2
ETHANE	1.1	2.9	3.0
PROPANE	0.2	0.8	0.8
N-BUTANE	TRACE	0.2	0.2
ISOBUTANE	0.1	0.3	0.3
N-PENTANE	TRACE	0.1	TRACE
ISOPENTANE	0.0	0.1	0.2
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	0.2	0.1
NITROGEN	2.3	1.8	1.2
OXYGEN	0.2	0.1	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	2.2	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.1	TRACE
HELIUM	0.02	0.01	0.01
HEATING VALUE*	986	1054	1059

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 157 SAMPLE 14270	INDEX 158 SAMPLE 14268	INDEX 159 SAMPLE 14269
STATE	TEXAS	TEXAS	TEXAS
COUNTY	KLEBERG	LAVACA	LAVACA
FIELD	DUNN MCCAMPBELL	WORD N	WORD N
WELL NAME	GULF STATE C NO. 937-1	NEUHAUS UNIT NO. 2	NEUHAUS UNIT NO. 2
LOCATION	STATE TRACT 937-S	J. SMOTHERS SUR. A-47	J. SMOTHERS SUR. A-47
OWNER	SUN OIL CO.	BASS ENTERPRISES PROD. CO.	BASS ENTERPRISES PROD. CO.
COMPLETED	10/03/72	03/13/73	04/20/74
SAMPLED	02/19/75	02/19/75	02/19/75
FORMATION	OLIG-FRIO	EOCE-WILCOX	EOCE-WILCOX
DEPTH, FEET	7757	7506	7100
WELLHEAD PRESSURE,PSIG	1590	2569	2369
OPEN FLOW, MCFD	5200	13500	12000
COMPONENT, MOLE PCT			
METHANE	94.0	84.8	86.4
ETHANE	2.9	6.0	5.9
PROPANE	0.8	3.3	2.9
N-BUTANE	0.2	0.8	0.8
ISOBUTANE	0.4	0.9	0.6
N-PENTANE	0.1	0.1	0.2
ISOPENTANE	0.1	0.6	0.6
CYCLOPENTANE	TRACE	0.2	0.1
HEXANES PLUS	0.1	0.4	0.3
NITROGEN	1.0	0.9	0.5
OXYGEN	0.0	TRACE	0.0
ARGON	0.0	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.4	2.0	1.7
HELIUM	0.01	0.01	0.01
HEATING VALUE*	1059	1167	1157

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 160 SAMPLE 14298	INDEX 161 SAMPLE 14533	INDEX 162 SAMPLE 14274
STATE	TEXAS	TEXAS	TEXAS
COUNTY	LAVACA	LIPSCOMB	LIVE OAK
FIELD	YOAKUM	LIPSCOMB SW	BRASLAU
WELL NAME	TURNER UNIT NO. 2	ANITA B. ANTHONY NO. 1	F. BRASLAU GU NO. 2
LOCATION	2 MI. SE OF YOAKUM	SEC. 372, BLK. 43, H&TC SUR.	J. POITEVENT SUR. A-324
OWNER	ENTERPRISE RESOURCES INC.	DIAMOND SHAMROCK CORP.	ATLANTIC RICHFIELD CO.
COMPLETED	04/11/73	09/17/75	02/26/73
SAMPLED	03/07/75	11/14/75	02/20/75
FORMATION	EOCE-WILCOX	PENN-CLEVELAND	EOCE-WILCOX
DEPTH, FEET	8812	8194	8550
WELLHEAD PRESSURE,PSIG	1860	2020	5020
OPEN FLOW, MCFD	9844	2800	60000
COMPONENT, MOLE PCT			
METHANE	85.5	85.3	86.7
ETHANE	6.3	7.6	6.1
PROPANE	3.0	3.6	2.9
N-BUTANE	0.8	0.9	0.7
ISOBUTANE	0.6	0.4	0.5
N-PENTANE	0.1	0.2	0.1
ISOPENTANE	0.2	0.2	0.4
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.2
NITROGEN	0.3	1.2	0.2
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.8	0.3	2.2
HELIUM	TRACE	0.10	0.01
HEATING VALUE*	1122	1160	1139

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 163 SAMPLE 14262	INDEX 164 SAMPLE 14331	INDEX 165 SAMPLE 14332
STATE	TEXAS	TEXAS	TEXAS
COUNTY	LOVING	MCMULLEN	MCMULLEN
FIELD	VERMEJO	HOSTETTER	HOSTETTER
WELL NAME	EL PASO STATE NO. 1	GOUGER GAS UNIT 2 NO. 2	GOUGER GAS UNIT 2 NO. 2
LOCATION	SEC. 54, BLK. 1, W&NW SUR.	SEC. 67, AB&M SUR. A-27	SEC. 67, AB&M SUR. A-27
OWNER	FOREST OIL CORP.	TEXACO INC.	TEXACO INC.
COMPLETED	07/26/73	01/31/73	01/31/73
SAMPLED	02/14/75	05/09/75	05/09/75
FORMATION	SILU-FUSSELMAN	EOCE-WILCOX	-SCHULZE
DEPTH, FEET	18804	9390	9070
WELLHEAD PRESSURE,PSIG	6100	5900	7056
OPEN FLOW, MCFD	32000	8000	24000
COMPONENT, MOLE PCT			
METHANE	96.3	86.5	86.4
ETHANE	0.4	5.5	5.4
PROPANE	TRACE	3.3	3.5
N-BUTANE	0.0	0.8	0.8
ISOBUTANE	0.0	0.9	0.9
N-PENTANE	0.0	0.2	0.2
ISOPENTANE	0.0	0.4	0.3
CYCLOPENTANE	0.0	0.1	0.1
HEXANES PLUS	0.0	0.2	0.3
NITROGEN	0.9	0.4	0.6
OXYGEN	TRACE	0.0	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.1	0.0	0.0
CARBON DIOXIDE	2.2	1.7	1.6
HELIUM	0.02	TRACE	TRACE
HEATING VALUE*	983	1157	1161

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 166 SAMPLE 14273	INDEX 167 SAMPLE 14502	INDEX 168 SAMPLE 14320
STATE	TEXAS	TEXAS	TEXAS
COUNTY	MCMULLEN	MITCHELL	MONTGOMERY
FIELD	HOSTETTER N	SPADE RANCH	PAUL NELSON W
WELL NAME	D. W. RHODE 54 NO. 1	SPADE NO. 2	GOODSON NO. 2
LOCATION	ALFRED SPAULDING SUR. 54	SEC. 25, BLK. 18, SPRR SUR.	W. S. TAYLOR SUR. A-552
OWNER	ATLANTIC RICHFIELD CO.	BURK ROYALTY CO.	MCCORMICK O & G CORP.
COMPLETED	01/25/75	06/04/74	05/16/73
SAMPLED	02/20/75	10/16/75	04/20/75
FORMATION	EOCE-WILCOX	PERM-YATES	EOCE-YEGUA
DEPTH, FEET	9000	546	7420
WELLHEAD PRESSURE,PSIG	5800	205	2600
OPEN FLOW, MCFD	28500	2000	630
COMPONENT, MOLE PCT			
METHANE	90.1	52.8	85.5
ETHANE	4.2	4.4	6.2
PROPANE	1.2	0.2	2.9
N-BUTANE	0.2	0.1	0.7
ISOBUTANE	0.3	0.1	0.8
N-PENTANE	TRACE	TRACE	0.1
ISOPENTANE	0.1	0.1	0.4
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	TRACE	0.2
NITROGEN	0.1	41.0	2.5
OXYGEN	0.0	TRACE	0.0
ARGON	TRACE	0.2	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	3.6	0.3	0.7
HELIUM	0.01	0.84	0.02
HEATING VALUE*	1045	630	1138

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 169 SAMPLE 14519	INDEX 170 SAMPLE 14267	INDEX 171 SAMPLE 14305
STATE	TEXAS	TEXAS	TEXAS
COUNTY	NEWTON	NUECES	PECOS
FIELD	HARTBURG NW	BRAYTON	APACHE CAMP
WELL NAME	E. C. HANKAMER B NO. 9	DRISCOLL-SEVIER NO. 3	WHITE ESTATE A NO. 1
LOCATION	SEC. 14, H&TBRR SUR. 912	SEC. 303, PALO ALTO GRANT	SEC. 97,BLK.194,G&R SUR.
OWNER	ATLANTIC RICHFIELD CO.	HNG OIL CO.	TEXAS OIL AND GAS CORP.
COMPLETED	03/15/74	07/16/73	02/15/74
SAMPLED	10/30/75	02/17/75	03/13/75
FORMATION	OLIG-FRIO	OLIG-FRIO	ORDO-ELLENBURGER
DEPTH, FEET	7347	7429	9534
WELLHEAD PRESSURE,PSIG	1367	2654	2740
OPEN FLOW, MCFD	2575	8200	3250
COMPONENT, MOLE PCT			
METHANE	91.2	89.8	83.8
ETHANE	4.8	5.3	5.3
PROPANE	2.0	2.0	3.4
N-BUTANE	0.5	0.4	1.2
ISOBUTANE	0.4	0.6	0.5
N-PENTANE	0.1	0.1	0.5
ISOPENTANE	0.2	0.3	0.4
CYCLOPENTANE	0.1	0.3	0.1
HEXANES PLUS	0.1	0.6	0.4
NITROGEN	0.4	0.2	3.2
OXYGEN	0.0	0.0	0.0
ARGON	0.0	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.2	0.4	1.2
HELIUM	TRACE	TRACE	0.08
HEATING VALUE*	1114	1149	1152

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 172 SAMPLE 14260	INDEX 173 SAMPLE 14261	INDEX 174 SAMPLE 14501
STATE	TEXAS	TEXAS	TEXAS
COUNTY	PECOS	PECOS	PECOS
FIELD	COYANOSA	COYANOSA	COYANOSA
WELL NAME	J. O. NEAL 42 NO. 4	J. O. NEAL 42 NO. 4	J. O. NEAL 42 NO. 5
LOCATION	SEC. 42, BLK. OW, TTRR SUR.	SEC. 42, BLK. OW, TTRR SUR.	SEC. 42, BLK.OW, TTRRCO.SUR.
OWNER	ATLANTIC RICHFIELD CO.	ATLANTIC RICHFIELD CO.	ATLANTIC RICHFIELD CO.
COMPLETED	06/24/74	06/24/74	04/16/75
SAMPLED	02/13/75	02/13/75	10/14/75
FORMATION	DEVO-	MISS-	PERM-BELL CANYON
DEPTH, FEET	11996	11156	5172
WELLHEAD PRESSURE,PSIG	1613	5552	2350
OPEN FLOW, MCFD	4056	24000	14975
COMPONENT, MOLE PCT			
METHANE	92.9	92.7	89.8
ETHANE	3.1	3.9	4.4
PROPANE	1.0	1.2	1.5
N-BUTANE	0.2	0.3	0.4
ISOBUTANE	0.2	0.2	0.4
N-PENTANE	0.1	0.1	0.1
ISOPENTANE	0.1	0.1	0.1
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	0.8	0.9	2.9
OXYGEN	TRACE	0.1	0.0
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.4	0.4	0.1
HELIUM	0.01	0.02	0.03
HEATING VALUE*	1050	1071	1072

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 175 SAMPLE 14505	INDEX 176 SAMPLE 14266	INDEX 177 SAMPLE 14515
STATE	TEXAS	TEXAS	TEXAS
COUNTY	PECOS	PECOS	POLK
FIELD	GMW	HOKIT E	LIVINGSTON
WELL NAME	ALLISON RANCH 3-170 NO. 1	HARRAL NO. 23 NO. 1	DR. H. J. PRATT NO. 16
LOCATION	SEC. 3, BLK. 170, TTRRCO.SUR	SEC. 23, BLK. 127, T&STL SUR	SWABB CITY
OWNER	CONTINENTAL OIL CO.	UNION TEXAS PETROLEUM	SUN OIL CO.
COMPLETED	08/05/74	06/04/74	08/20/75
SAMPLED	10/--/75	02/--/75	10/30/75
FORMATION	SILU-MONTOYA	PENN-STRAWN	EOCE-YEGUA
DEPTH, FEET	12994	9777	4614
WELLHEAD PRESSURE,PSIG	NOT GIVEN	3250	900
OPEN FLOW, MCFD	21000	23000	356
COMPONENT, MOLE PCT			
METHANE	56.1	49.8	90.3
ETHANE	0.2	13.7	3.3
PROPANE	0.1	14.3	1.7
N-BUTANE	0.0	9.3	0.3
ISOBUTANE	0.0	3.5	0.2
N-PENTANE	0.0	3.3	TRACE
ISOPENTANE	0.0	3.0	0.1
CYCLOPENTANE	0.0	0.4	0.1
HEXANES PLUS	0.0	1.6	0.1
NITROGEN	1.1	0.2	3.1
OXYGEN	TRACE	TRACE	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	42.5	0.8	0.8
HELIUM	0.03	TRACE	0.02
HEATING VALUE*	574	1919	1048

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 178 SAMPLE 14282	INDEX 179 SAMPLE 14319	INDEX 180 SAMPLE 14402
STATE	TEXAS	TEXAS	TEXAS
COUNTY	POTTER	REFUGIO	ROBERTS
FIELD	PANHANDLE W/RED CAVE	FAGAN	CARRIE KILLEBREW
WELL NAME	BIVINS 80R	FAGAN ESTATE M NO. 4	KILLEBREW A NO. 1
LOCATION	SEC. 34, BLK. 0-18, D-P SUR.	MARY BRYNE SUR. A-8	SEC. 220, BLK. 42, H&TC SUR.
OWNER	C.I.G. EXPLORATION, INC.	TEXAS OIL & GAS CORP.	EASON OIL CO.
COMPLETED	02/15/75	08/30/73	08/09/74
SAMPLED	02/28/75	03/25/75	06/19/75
FORMATION	PERM-RED CAVE	NOT GIVEN	PENN-MORROW
DEPTH, FEET	1816	8030	8536
WELLHEAD PRESSURE,PSIG	256	2230	2550
OPEN FLOW, MCFD	724	18000	58500
COMPONENT, MOLE PCT			
METHANE	79.3	88.7	80.3
ETHANE	7.2	4.8	10.4
PROPANE	3.7	3.0	3.9
N-BUTANE	0.3	1.0	0.7
ISOBUTANE	0.3	0.6	0.5
N-PENTANE	TRACE	0.3	0.2
ISOPENTANE	TRACE	0.5	0.0
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	TRACE	0.2	0.1
NITROGEN	8.4	0.5	2.2
OXYGEN	0.5	0.0	0.2
ARGON	TRACE	0.0	TRACE
HYDROGEN	TRACE	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.3	1.4
HELIUM	0.16	0.01	0.05
HEATING VALUE*	1048	1164	1155

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 181 SAMPLE 14401	INDEX 182 SAMPLE 14388	INDEX 183 SAMPLE 14470
STATE	TEXAS	TEXAS	TEXAS
COUNTY	ROBERTS	ROBERTS	ROBERTS
FIELD	MORRISON RANCH	SHREIKEY	SHREIKEY
WELL NAME	CONRAD NO. 1	ETTA GILL NO. 1	BOB MCCOY B. NO. 2
LOCATION	SEC. 192, BL. 42, H&TC SUR.	SEC. 16, BLK. M-2, H&GN SUR.	SEC. 14, BLK. M-2, H&GN SUR.
OWNER	DYCO PETROLEUM CORP.	SIDWELL OIL & GAS, INC.	J. M. HUBER CORP.
COMPLETED	NOT GIVEN	01/19/75	09/16/74
SAMPLED	06/19/75	06/17/75	09/24/75
FORMATION	NOT GIVEN	PENN-MORROW	PENN-MORROW
DEPTH, FEET	NOT GIVEN	11401	11076
WELLHEAD PRESSURE,PSIG	NOT GIVEN	3200	3217
OPEN FLOW, MCFD	NOT GIVEN	10000	13800
COMPONENT, MOLE PCT			
METHANE	74.1	82.0	94.6
ETHANE	5.3	8.5	2.3
PROPANE	2.0	3.7	0.6
N-BUTANE	0.4	1.2	0.2
ISOBUTANE	0.6	0.7	0.1
N-PENTANE	0.1	0.4	TRACE
ISOPENTANE	0.2	0.9	0.1
CYCLOPENTANE	TRACE	0.1	TRACE
HEXANES PLUS	0.2	0.5	0.1
NITROGEN	12.9	1.0	0.8
OXYGEN	1.8	TRACE	0.0
ARGON	0.1	0.0	0.0
HYDROGEN	0.0	TRACE	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.1	0.9	1.1
HELIUM	0.03	0.03	0.03
HEATING VALUE*	954	1228	1035

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 184 SAMPLE 14537	INDEX 185 SAMPLE 14315	INDEX 186 SAMPLE 14271
STATE	TEXAS	TEXAS	TEXAS
COUNTY	ROBERTS	RUSK	SAN PATRICIO
FIELD	SHREIKEY	MINDEN	PORTILLA
WELL NAME	BYRUM-COFFEE NO. 1	C. C. BURKS NO. 1	MINNIE S. WELDER NO. 40
LOCATION	SEC. 12, BLK. M-2, H&GN SUR.	DANIEL WOODLAND SUR. A-845	SEC. 23, PORTILLA GRANT
OWNER	HOOVER & BRACKEN, INC.	JONES O'BRIEN INC.	SUPERIOR OIL CO.
COMPLETED	05/25/74	01/29/73	01/03/73
SAMPLED	11/23/75	03/28/75	02/20/75
FORMATION	PENN-MORROW	CRET-TRAVIS PEAK	OLIG-FRIO
DEPTH, FEET	10844	7108	6974
WELLHEAD PRESSURE,PSIG	3600	2711	930
OPEN FLOW, MCFD	150000	4400	291
COMPONENT, MOLE PCT			
METHANE	93.2	88.3	89.7
ETHANE	3.7	5.1	4.7
PROPANE	0.8	2.2	2.7
N-BUTANE	0.2	0.7	0.7
ISOBUTANE	0.1	0.7	0.7
N-PENTANE	TRACE	0.3	0.2
ISOPENTANE	0.1	0.2	0.4
CYCLOPENTANE	TRACE	TRACE	0.1
HEXANES PLUS	0.1	0.2	0.2
NITROGEN	0.7	1.2	0.5
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.1	1.0	0.1
HELIUM	0.04	0.02	0.01
HEATING VALUE*	1051	1122	1150

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 187 SAMPLE 14275	INDEX 188 SAMPLE 14317	INDEX 189 SAMPLE 14548
STATE	TEXAS	TEXAS	TEXAS
COUNTY	SAN PATRICIO	SCHLEICHER	SHERMAN
FIELD	TAFT W	HULLDALE W	COLD WATER CREEK
WELL NAME	MAYO NO. 1	BYARS NO. 1	MURPHY NO. G-1
LOCATION	T. T. WILLIAMSON SUR. A-151	T. J. ALLCORN SUR. 79-1/2	SEC. 128, BLK. 1C, GH&H SUR.
OWNER	EDWIN L. COX	I. W. LOVELADY	PHILLIPS PETROLEUM CO.
COMPLETED	01/22/73	07/23/74	08/28/75
SAMPLED	02/10/75	04/09/75	12/17/75
FORMATION	MIOC-CATAHOULA	PENN-HARKEY	PENN-MARMATON
DEPTH, FEET	3900	5462	5338
WELLHEAD PRESSURE,PSIG	1447	1850	1291
OPEN FLOW, MCFD	3000	5880	42000
COMPONENT, MOLE PCT			
METHANE	98.3	77.1	73.7
ETHANE	0.1	6.4	8.8
PROPANE	0.1	4.5	5.5
N-BUTANE	0.1	1.0	1.5
ISOBUTANE	TRACE	0.7	0.6
N-PENTANE	0.1	0.2	0.3
ISOPENTANE	0.1	0.2	0.4
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	1.0	9.5	8.8
OXYGEN	0.0	0.0	TRACE
ARGON	0.0	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	TRACE	0.1
HELIUM	0.01	0.25	0.22
HEATING VALUE*	1017	1092	1153

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 190 SAMPLE 14432	INDEX 191 SAMPLE 14496	INDEX 192 SAMPLE 14413
STATE	TEXAS	TEXAS	TEXAS
COUNTY	SUTTON	UPTON	WARD
FIELD	KEN	PEGASUS S	BARSTOW
WELL NAME	ADAMS NO. 1	VIRGIL POWELL NO. 10-1	AMERICAN NAT. INS. CO. NO. 1
LOCATION	SEC. 59, BLK. A, GWT&P SUR.	SEC.10, BLK 41, T5S, T&P SUR	SEC. 44, BLK. 33, H&TC SUR.
OWNER	ESTORIL PRODUCING CORP.	CLINTON OIL CO.	NORTHERN NATURAL GAS CO.
COMPLETED	03/12/74	05/21/75	02/01/74
SAMPLED	08/02/75	10/21/75	07/15/75
FORMATION	PENN-CROSS CUT	DEVO-	PERM-WICHITA-ALBANY
DEPTH, FEET	3065	12010	15526
WELLHEAD PRESSURE,PSIG	650	3307	2005
OPEN FLOW, MCFD	5000	4550	14914
COMPONENT, MOLE PCT			
METHANE	80.6	79.4	98.1
ETHANE	5.1	12.5	0.4
PROPANE	2.4	3.9	TRACE
N-BUTANE	0.4	0.8	0.0
ISOBUTANE	0.3	0.4	0.0
N-PENTANE	0.1	0.2	0.0
ISOPENTANE	TRACE	0.1	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	TRACE	0.1	0.0
NITROGEN	10.6	1.6	0.6
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.1	0.9	0.8
HELIUM	0.32	0.03	0.01
HEATING VALUE*	998	1188	1001

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 193 SAMPLE 14433	INDEX 194 SAMPLE 14418	INDEX 195 SAMPLE 14265
STATE	TEXAS	TEXAS	TEXAS
COUNTY	WARD	WARD	WARD
FIELD	BEALL	BIG LION	QUITO E
WELL NAME	HERO GAS UNIT NO. 1	MIDLAND NATL. BK. NO. 1	UNIVERSITY NO. 1
LOCATION	SEC. 78, BLK. 34, H&TC SUR.	SEC. 146, BLK. 34, H&TC SUR.	SEC. 31, BLK. 18
OWNER	EXXON CO., U.S.A.	TEXAS AMERICAN OIL CORP.	GULF OIL CO.-U.S.
COMPLETED	03/01/74	08/26/74	08/30/74
SAMPLED	08/11/75	07/23/75	02/--/75
FORMATION	DEVO-	PENN-MORROW	PENN-ATOKA
DEPTH, FEET	12239	15879	14300
WELLHEAD PRESSURE,PSIG	4084	8067	10117
OPEN FLOW, MCFD	79031	2156	11500
COMPONENT, MOLE PCT			
METHANE	93.7	97.1	96.7
ETHANE	2.3	1.1	1.9
PROPANE	0.6	0.2	0.3
N-BUTANE	0.1	0.0	TRACE
ISOBUTANE	0.1	0.0	0.1
N-PENTANE	0.1	0.0	TRACE
ISOPENTANE	TRACE	0.0	0.1
CYCLOPENTANE	TRACE	0.0	TRACE
HEXANES PLUS	0.1	0.0	0.1
NITROGEN	0.6	0.4	0.5
OXYGEN	0.0	0.0	0.0
ARGON	0.0	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.4	1.2	0.3
HELIUM	0.01	0.01	0.01
HEATING VALUE*	1022	1009	1034

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 196 SAMPLE 14429	INDEX 197 SAMPLE 14430	INDEX 198 SAMPLE 14414
STATE	TEXAS	TEXAS	TEXAS
COUNTY	WARD	WARD	WARD
FIELD	QUITO E	QUITO E	WAR-WINK S
WELL NAME	P. WALKER NO. 2	P. WALKER NO. 2	UNIVERSITY 10-18 NO. 2
LOCATION	SEC. 40, A. J. WILSON SUR.	SEC. 40, A. J. WILSON SUR.	SEC. 10, BLK. 18, UL SUR.
OWNER	GULF OIL CO.-U.S.	GULF OIL CO.-U.S.	SKELLY OIL CO. ET AL.
COMPLETED	08/01/74	08/01/74	03/26/74
SAMPLED	08/07/75	08/07/75	07/15/75
FORMATION	SILU- FUSSELMAN	ORDO-ELLENBURGER	PERM- WICHITA-ALBANY
DEPTH, FEET	17095	19370	11866
WELLHEAD PRESSURE,PSIG	5400	3400	7713
OPEN FLOW, MCFD	43000	11720	2300
COMPONENT, MOLE PCT			
METHANE	94.1	98.0	83.1
ETHANE	0.5	0.2	9.4
PROPANE	0.1	0.1	4.0
N-BUTANE	TRACE	0.0	0.9
ISOBUTANE	TRACE	0.0	0.4
N-PENTANE	TRACE	0.0	0.1
ISOPENTANE	TRACE	0.0	0.2
CYCLOPENTANE	TRACE	0.0	TRACE
HEXANES PLUS	TRACE	0.0	0.1
NITROGEN	0.6	0.4	1.8
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	4.6	1.2	0.1
HELIUM	0.01	0.02	0.02
HEATING VALUE*	965	999	1176

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 199 SAMPLE 14278	INDEX 200 SAMPLE 14408	INDEX 201 SAMPLE 14264
STATE	TEXAS	TEXAS	TEXAS
COUNTY	WEBB	WHARTON	WHEELER
FIELD	THOMPSONVILLE NE	MENEFEE N	WHEELER
WELL NAME	BRUNI ESTATE D NO. 2X	T. N. MENEFEE NO. 1	S. K. WILLIAMS NO. 1
LOCATION	BLK. 32 A. DE ARRIBA GR.A199	S. P. MIDDLETON LEAGUE A-269	SEC. 2, BLK. E, T&NO SUR.
OWNER	ATLANTIC RICHFIELD CO.	WINDFOHR OIL CO.	GETTY OIL CO.
COMPLETED	09/17/72	04/28/73	09/30/74
SAMPLED	02/25/75	07/01/75	01/12/75
FORMATION	EOCE-WILCOX	OLIG-FRIO	DEVO-HUNTON
DEPTH, FEET	9786	4530	14480
WELLHEAD PRESSURE,PSIG	5300	960	4484
OPEN FLOW, MCFD	9000	2400	34000
COMPONENT, MOLE PCT			
METHANE	87.8	98.3	93.5
ETHANE	4.0	0.7	3.3
PROPANE	1.6	0.1	1.1
N-BUTANE	0.4	TRACE	0.3
ISOBUTANE	0.4	TRACE	0.2
N-PENTANE	TRACE	0.0	TRACE
ISOPENTANE	0.3	TRACE	0.1
CYCLOPENTANE	0.1	TRACE	TRACE
HEXANES PLUS	0.1	TRACE	0.1
NITROGEN	0.2	0.5	0.6
OXYGEN	0.0	0.0	0.0
ARGON	0.0	TRACE	0.0
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	5.2	0.4	0.8
HELIUM	TRACE	0.01	0.02
HEATING VALUE*	1051	1011	1061

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 202 SAMPLE 14277	INDEX 203 SAMPLE 14406	INDEX 204 SAMPLE 14381
STATE	TEXAS	TEXAS	WEST VIRGINIA
COUNTY	WHEELER	WHEELER	LEWIS
FIELD	WHEELER NE	WHEELER-PAN	FINSTER
WELL NAME	J. R. REED NO. 1-31	CITY OF SHAMROCK NO. 1	MARTHA POSEY NO. 11842
LOCATION	SEC. 31, BLK. A-3, H&GN SUR.	SEC. 2J, POITEVENT SUR.	COLLINS SETTLEMENT DISTRICT
OWNER	ARKLA EXPLORATION CO.	GETTY OIL CO.	CONSOLIDATED GAS SUPPLY CORP
COMPLETED	12/20/74	04/11/75	10/09/74
SAMPLED	02/28/75	06/--/75	06/11/75
FORMATION	PENN-MORROW	DEVO-HUNTON	DEVO-FIFTY FOOT SAND
DEPTH, FEET	16739	14842	2293
WELLHEAD PRESSURE,PSIG	7384	5913	960
OPEN FLOW, MCFD	10131	27500	3916
COMPONENT, MOLE PCT			
METHANE	96.9	93.1	88.9
ETHANE	0.6	3.5	4.9
PROPANE	0.1	1.2	2.1
N-BUTANE	TRACE	0.3	0.5
ISOBUTANE	0.1	0.2	0.5
N-PENTANE	TRACE	0.1	0.1
ISOPENTANE	TRACE	0.1	0.2
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	0.1	0.1	0.1
NITROGEN	0.7	0.7	2.4
OXYGEN	TRACE	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.1
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.5	0.8	TRACE
HELIUM	0.02	0.02	0.14
HEATING VALUE*	1003	1067	1095

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 205 SAMPLE 14316	INDEX 206 SAMPLE 14504	INDEX 207 SAMPLE 14377
STATE	WYOMING	WYOMING	WYOMING
COUNTY	PARK	SWEETWATER	SWEETWATER
FIELD	BADGER BASIN W	DESERT SPRINGS	KINNEY
WELL NAME	GPE 23-58-102 BN NO. 1	PLAYA UNIT NO. 2	KINNEY UNIT NO. 1
LOCATION	SEC. 23, T58N, R102W	SEC. 5, T20N, R98W	SEC. 18, T13N, R99W
OWNER	GAS PROD. ENTERPRISES INC.	MESA PETROLEUM CO.	MOUNTAIN FUEL SUPPLY CO.
COMPLETED	NOT GIVEN	05/01/75	03/29/75
SAMPLED	04/--/74	10/15/75	05/22/75
FORMATION	CRET-DAKOTA	CRET-LEWIS	JURA-NUGGET
DEPTH, FEET	11398	5466	14722
WELLHEAD PRESSURE,PSIG	2810	1150	4100
OPEN FLOW, MCFD	NOT GIVEN	3050	4000
COMPONENT, MOLE PCT			
METHANE	55.2	88.2	93.1
ETHANE	8.1	6.1	0.4
PROPANE	2.6	1.9	TRACE
N-BUTANE	0.4	0.3	0.0
ISOBUTANE	0.3	0.5	0.0
N-PENTANE	0.0	0.1	0.0
ISOPENTANE	0.1	0.2	0.0
CYCLOPENTANE	TRACE	0.1	0.0
HEXANES PLUS	TRACE	0.1	0.0
NITROGEN	26.0	0.5	4.0
OXYGEN	63.0	0.0	0.0
ARGON	0.3	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.7	2.0	2.5
HELIUM	0.02	0.01	0.08
HEATING VALUE*	799	1101	950

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 208 SAMPLE 14425	INDEX 209 SAMPLE 14511
STATE	WYOMING	WYOMING
COUNTY	SWEETWATER	SWEETWATER
FIELD	TABLE ROCK	TABLE ROCK
WELL NAME	TABLE ROCK UNIT NO. 19	TABLE ROCK UNIT NO. 19
LOCATION	SEC. 35, T19N, R98W	SEC. 35, T19N, R98W
OWNER	TEXACO INC.	TEXACO INC.
COMPLETED	07/30/75	NOT GIVEN
SAMPLED	07/30/75	10/24/75
FORMATION	MISS-MADISON	MISS-MADISON
DEPTH, FEET	18020	19000
WELLHEAD PRESSURE,PSIG	5210	5200
OPEN FLOW, MCFD	20000	NOT GIVEN
COMPONENT, MOLE PCT		
METHANE	75.0	73.7
ETHANE	2.0	2.0
PROPANE	0.6	0.5
N-BUTANE	0.2	0.3
ISOBUTANE	0.1	0.1
N-PENTANE	TRACE	TRACE
ISOPENTANE	0.1	0.1
CYCLOPENTANE	TRACE	0.1
HEXANES PLUS	TRACE	0.1
NITROGEN	4.8	4.8
OXYGEN	TRACE	0.0
ARGON	TRACE	TRACE
HYDROGEN	0.0	0.0
HYDROGEN SULFIDE**	1.8	2.2
CARBON DIOXIDE	15.0	15.8
HELIUM	0.28	0.29
HEATING VALUE*	837	836

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 1 SAMPLE 14536	INDEX 2 SAMPLE 14481	INDEX 3 SAMPLE 14463
STATE	ALABAMA	COLORADO	MONTANA
COUNTY	ESCAMBIA	LA PLATA	DAWSON
FIELD	BIG ESCAMBIA CREEK	IGNACIO	MORGAN SYSTEM
LOCATION		8 IN.	MORGAN CREEK-8 IN LINE
OWNER	EXXON CO., U.S.A.	WESTERN SLOPE GAS CO.	MONTANA-DAKOTA UTILITIES CO.
SAMPLED	11/12/75	10/01/75	09/09/75
FORMATION	JURA-SMACKOVER	NOT GIVEN	CRET-BOWDOIN & PHILLIPS
PRESSURE,PSIG	780	700	350
FLOW,MCFD	6042	7400	10000
COMPONENT, MOLE PCT			
METHANE	72.3	94.9	93.3
ETHANE	12.1	1.5	0.2
PROPANE	7.1	0.2	TRACE
N-BUTANE	2.1	TRACE	0.0
ISOBUTANE	1.5	TRACE	0.0
N-PENTANE	0.3	TRACE	0.0
ISOPENTANE	0.5	TRACE	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	0.1	TRACE	0.0
NITROGEN	4.1	0.2	6.3
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	3.1	0.1
HELIUM	0.04	0.01	0.07
HEATING VALUE*	1294	993	949

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 4 SAMPLE 14462	INDEX 5 SAMPLE 14461	INDEX 6 SAMPLE 14465
STATE	MONTANA	MONTANA	MONTANA
COUNTY	FALLON	FALLON	GLACIER
FIELD	TIOGA AND BEAVER LODGE	WYOMING N AND S MONTANA	CARWAY,ADEN & CUTBANK EXPORT
LOCATION	CABIN CREEK PLANT-16 IN LINE	CABIN CREEK PLANT-12 IN LINE	20IN DISCH.-MAIN LINE NO. 1
OWNER	MONTANA-DAKOTA UTILITIES CO.	MONTANA-DAKOTA UTILITIES CO.	MONTANA POWER CO.
SAMPLED	09/09/75	09/09/75	09/11/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	350	300	559
FLOW,MCFD	6000	20000	110000
COMPONENT, MOLE PCT			
METHANE	82.6	94.4	92.6
ETHANE	10.1	3.1	2.4
PROPANE	1.0	0.2	0.7
N-BUTANE	TRACE	TRACE	0.1
ISOBUTANE	TRACE	0.1	0.1
N-PENTANE	TRACE	TRACE	0.0
ISOPENTANE	0.0	TRACE	0.1
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	TRACE
NITROGEN	6.0	1.6	2.9
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	TRACE	0.3	1.0
HELIUM	0.09	0.02	0.10
HEATING VALUE*	1044	1020	1010

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 7 SAMPLE 14464	INDEX 8 SAMPLE 14466	INDEX 9 SAMPLE 14467
STATE	MONTANA	MONTANA	MONTANA
COUNTY	GLACIER	GLACIER	GLACIER
FIELD	CUT BANK	VARIOUS FIELDS	WATERTON IN CANADA
LOCATION	20 IN INLET-MAIN LINE NO. 1	16IN INLET-MAIN LINE NO. 1	16IN INLET-MAIN LINE NO. 1
OWNER	MONTANA POWER CO.	MONTANA POWER CO.	MONTANA POWER CO.
SAMPLED	09/11/75	09/11/75	09/11/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	212	380	717
FLOW,MCFD	14400	28100	67300
COMPONENT, MOLE PCT			
METHANE	88.2	95.5	91.9
ETHANE	5.0	0.6	4.5
PROPANE	1.4	0.1	1.4
N-BUTANE	0.1	TRACE	0.4
ISOBUTANE	0.1	0.1	0.2
N-PENTANE	0.0	0.0	TRACE
ISOPENTANE	0.1	TRACE	TRACE
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	TRACE
NITROGEN	2.6	3.2	1.5
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	TRACE	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.4	0.3	0.0
HELIUM	0.07	0.11	0.02
HEATING VALUE*	1030	984	1068

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 10 SAMPLE 14476	INDEX 11 SAMPLE 14483	INDEX 12 SAMPLE 14482
STATE	NEW MEXICO	NEW MEXICO	NEW MEXICO
COUNTY	CHAVES	CHAVES	MCKINLEY
FIELD	PERMIAN BASIN	PERMIAN BASIN	FOUR CORNERS AREA
LOCATION	30 IN.	30 IN. MAIN LINE	18 & 20 IN.
OWNER	EL PASO NATURAL GAS CO.	TRANSWESTERN PIPELINE CO.	SOUTHERN UNION GAS CO.
SAMPLED	10/02/75	10/02/75	10/01/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	750	750	300
FLOW,MCFD	550000	638000	150000
COMPONENT, MOLE PCT			
METHANE	88.9	92.0	92.0
ETHANE	7.0	3.5	6.1
PROPANE	0.9	0.9	0.4
N-BUTANE	0.1	0.2	0.1
ISOBUTANE	0.1	0.1	0.1
N-PENTANE	TRACE	0.1	TRACE
ISOPENTANE	TRACE	TRACE	TRACE
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	0.1	TRACE
NITROGEN	2.5	0.8	0.4
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	0.0	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.4	2.3	0.9
HELIUM	0.04	0.03	0.03
HEATING VALUE*	1056	1038	1058

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 13 SAMPLE 14475	INDEX 14 SAMPLE 14474	INDEX 15 SAMPLE 14460
STATE	NEW MEXICO	NEW MEXICO	SOUTH DAKOTA
COUNTY	MCKINLEY	MCKINLEY	BUTTE
FIELD	FROM SAN JUAN RIVER PLANT	SAN JUAN BASIN	BELL CREEK, RECLUSE, UTE
LOCATION	24" GALLUP "B"	34 IN. FROM CHACO	BELLE FOURCHE STATION
OWNER	EL PASO NATURAL GAS CO.	EL PASO NATURAL GAS CO.	MONTANA-DAKOTA UTILITIES CO.
SAMPLED	09/30/75	09/30/75	09/09/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	756	680	400
FLOW,MCFD	198000	843000	15000
COMPONENT, MOLE PCT			
METHANE	88.4	89.1	82.0
ETHANE	7.5	7.6	8.8
PROPANE	2.0	1.7	0.5
N-BUTANE	0.2	0.1	0.1
ISOBUTANE	0.2	0.1	TRACE
N-PENTANE	TRACE	TRACE	TRACE
ISOPENTANE	0.1	TRACE	0.0
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	TRACE
NITROGEN	0.7	0.5	6.8
OXYGEN	0.0	0.0	1.0
ARGON	TRACE	TRACE	0.1
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.9	0.9	0.7
HELIUM	0.04	0.03	0.04
HEATING VALUE*	1099	1090	1005

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H_2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 16 SAMPLE 14485	INDEX 17 SAMPLE 14477	INDEX 18 SAMPLE 14478
STATE	TEXAS	TEXAS	TEXAS
COUNTY	CRANE	EL PASO	EL PASO
FIELD	WEST TEXAS FIELDS	PERMIAN BASIN	WEST TEXAS PERMIAN BASIN
LOCATION	36 IN. LINE	A & B LINE 26 TO 30 IN.	C LINE 30 IN.
OWNER	COASTAL STATES GAS PROD. CO.	EL PASO NATURAL GAS CO.	EL PASO NATURAL GAS CO.
SAMPLED	10/07/75	10/03/75	10/03/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	875	550	1040
FLOW,MCFD	410000	1150000	564000
COMPONENT, MOLE PCT			
METHANE	95.7	90.0	95.4
ETHANE	1.6	6.3	2.6
PROPANE	0.2	1.4	0.5
N-BUTANE	TRACE	0.1	TRACE
ISOBUTANE	TRACE	0.1	0.1
N-PENTANE	TRACE	0.0	TRACE
ISOPENTANE	TRACE	TRACE	0.0
CYCLOPENTANE	TRACE	TRACE	TRACE
HEXANES PLUS	TRACE	TRACE	TRACE
NITROGEN	0.6	2.0	0.9
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	1.7	0.1	0.5
HELIUM	0.02	0.03	0.02
HEATING VALUE*	1003	1068	1029

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 19 SAMPLE 14488	INDEX 20 SAMPLE 14479	INDEX 21 SAMPLE 14486
STATE	TEXAS	TEXAS	TEXAS
COUNTY	KIMBLE	LAMB	PECOS
FIELD	WEST TEXAS AREA	W. TEXAS DELAWARE BASIN	GOMEZ & GRAY RANCH
LOCATION	36 IN.	24 IN.	30 IN. LINE
OWNER	OASIS PIPELINE CO.	EL PASO NATURAL GAS CO.	COASTAL STATES GAS PROD. CO.
SAMPLED	10/08/75	10/09/75	10/07/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	740	610	1040
FLOW,MCFD	800000	500000	220000
COMPONENT, MOLE PCT			
METHANE	94.5	85.6	52.0
ETHANE	2.8	7.1	0.1
PROPANE	0.9	1.0	TRACE
N-BUTANE	0.2	0.1	0.0
ISOBUTANE	0.1	0.1	0.0
N-PENTANE	0.1	TRACE	0.0
ISOPENTANE	TRACE	TRACE	0.0
CYCLOPENTANE	TRACE	TRACE	0.0
HEXANES PLUS	0.1	TRACE	0.0
NITROGEN	0.7	4.0	0.5
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	TRACE
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	0.7	1.9	47.2
HELIUM	0.03	0.05	0.03
HEATING VALUE*	1050	1027	529

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX 22 SAMPLE 14487	INDEX 23 SAMPLE 14484	INDEX 24 SAMPLE 14480
STATE	TEXAS	TEXAS	UTAH
COUNTY	PECOS	PECOS	SAN JUAN
FIELD	GOMEZ & GRAY RANCH	WEST TEXAS AREA	SAN JUAN BASIN
LOCATION	30 IN. AFTER PROCESSING	36 IN. LINE	26 IN.
OWNER	COASTAL STATES GAS PROD. CO.	LONE STAR GAS CO.	NORTHWEST PIPELINE CORP.
SAMPLED	10/07/75	10/06/75	09/30/75
FORMATION	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE,PSIG	1010	760	640
FLOW,MCFD	97000	260000	185000
COMPONENT, MOLE PCT			
METHANE	96.3	96.6	90.5
ETHANE	0.1	1.4	6.3
PROPANE	TRACE	0.2	1.5
N-BUTANE	0.0	0.1	TRACE
ISOBUTANE	0.0	0.1	0.1
N-PENTANE	0.0	TRACE	TRACE
ISOPENTANE	0.0	0.0	TRACE
CYCLOPENTANE	0.0	TRACE	TRACE
HEXANES PLUS	0.0	TRACE	TRACE
NITROGEN	0.9	0.9	0.3
OXYGEN	0.0	0.0	0.0
ARGON	TRACE	TRACE	TRACE
HYDROGEN	0.0	0.0	0.0
HYDROGEN SULFIDE**	0.0	0.0	0.0
CARBON DIOXIDE	2.6	0.7	1.2
HELIUM	0.06	0.02	0.02
HEATING VALUE*	977	1016	1072

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 3. - SAMPLES FROM GAS AND OIL WELLS IN FOREIGN COUNTRIES

	INDEX 1 SAMPLE 14456		
COUNTRY.....	CANADA		
STATE OR PROVINCE.....	ALBERTA		
FIELD.....	NOT GIVEN		
WELL NAME.....	ROW KY NORTH NO. 1		
LOCATION.....	7-14-33-20 W4M		
OWNER.....	AMOCO CANADA PET. CO.		
COMPLETED.....	NOT GIVEN		
SAMPLED.....	07/24/75		
FORMATION.....	CRET-BASIL		
DEPTH, FEET.....	4495		
WELLHEAD PRESSURE,PSIG...	1036		
OPEN FLOW, MCFD.....	NOT GIVEN		
COMPONENT, MOLE PCT			
METHANE.....	86.4	----------	
ETHANE.....	6.4		
PROPANE.....	3.3	----------	
N-BUTANE.....	0.7		
ISOBUTANE.....	0.7	----------	
N-PENTANE.....	0.2		
ISOPENTANE.....	0.2	----------	
CYCLOPENTANE.....	TRACE		
HEXANES PLUS.....	0.1	----------	
NITROGEN.....	1.9		
OXYGEN.....	0.0	----------	
ARGON.....	TRACE		
HYDROGEN.....	0.0	----------	
HYDROGEN SULFIDE**.....	0.0		
CARBON DIOXIDE.....	TRACE	----------	
HELIUM.....	0.04		
HEATING VALUE*.....	1145	----------	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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